SELF-ASSESSMENT OF THEIR SITUATION BY THE POOR IN THE REPUBLIC OF KOREA

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To my parents and parents-in-law

TABLE OF CONTENTS

ABSTRACT

Because identifying the poor has been regarded as one of the key issues in poverty research, various methods have been presented to define the poor, using indicators such as income and/or deprivation. However, while a number of methods using these indicators have been employed, self-assessment of their situation by the poor has largely been ignored, even though these are the very persons concerned. In this context, this study aims to explore self-assessment by the poor in Korea.

This study first identifies the poor and then investigates their self-assessment. Previous studies have argued that the composition of the poor differs according to the use of income and/or deprivation as indicators of poverty. Furthermore, a pilot survey in this study confirmed that this could be true of the Korean situation. Therefore, this study classifies the poor into three groups: the income poor, whose income is lower than the 2005 official poverty line; the deprivation poor, whose deprivation scores are higher than a deprivation poverty line; and the consistently poor, who are poor in terms of both income and deprivation. Having defined the poor, self-assessment by these three groups is explored and compared in terms of two aspects: how the poor assess their situation; and which variables have an impact on their self-assessment.

This study uses a data set obtained by the 2004 official survey, specially designed and conducted for the 2005 poverty line set by the Korean government. While the data set has the advantage of being the largest and latest one in measuring poverty, in relation to this study there was a critical problem with the data set in that it was not intended to measure self-assessment by households, which is essential for this study. This meant that various questions that I had developed to measure self-assessment had to be inserted into the original survey questionnaire. However, due to practical limitations only one of them was included in the questionnaire.

Analysis of the data set shows that the income poor only account for 50% of the deprivation poor, which confirms that different groups are identified as poor when income and/or deprivation are used as indicators. It was also found that poverty status differs according to whether it is determined by self-assessment, income and/or deprivation, and that the influential impact of variables on self-assessment varies according to the three categories of the poor.

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I am also particularly grateful to Dr. Mi-Gon Kim and Dr. Hyun-Ju Lee, who included my question in the survey questionnaire and allowed me to use the survey data set within the timeframe required for my thesis. I would like to offer a word of special thanks to civil servants in Puyeo county office too, for their hard work in helping me carry out a pilot survey. This research would not have been possible without them.

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Whilst I was able to complete this thesis thanks to the help of everyone mentioned above, any deficiencies it may contain are entirely my responsibility.

AUTHOR'S DECLARATION

I declare that this thesis is my own work. The thesis has not been submitted for any other degree or professional qualification.

Seung-Ki Lee

LIST OF TABLES

LIST OF FIGURES

ABBREVIATIONS

CCSBL	Central Committee for Securing Basic Living
IMF	International Monetary Fund
KIHASA	Korea Institute for Health and Social Affairs
KNSO	Korean National Statistics Office
MOHW	Ministry of Health and Welfare
NTU	National Textile Union
PSPD	People's Solidarity for Participatory Democracy
SSC	Social Security Committee

CHAPTER 1. INTRODUCTION

1.1 Background to the study

This study discussing how the poor in the Republic of Korea (henceforth referred to as Korea) assess their situation, and what has an impact on their self-assessment, began with the question 'Do the poor in Korea see themselves as poor?' This challenges conventional methods of measuring poverty in the country, where the primary interest has been in how to identify the poor, without investigating how they assess their situation.

Since 1973, when poverty was first officially measured in Korea, the issue of how to identify the poor, particularly by using income as an indicator of poverty, has been central to poverty research and poverty policies in the country. However, there has been no discussion about how the poor assess their situation, despite the fact that these are the very people concerned in exercises to identify the poor, and even though we can contend that they know their own situation best. Since such assessment reflects the voice of the poor, its investigation will be meaningful, especially in the political arenas where popular opinion is first discussed. Given the fact that popular opinion is an increasingly significant factor in Korean policy-making, it is highly desirable to investigate self-assessment by the poor.

When we can argue that there is a need to explore self-assessment by *the poor*, another important issue will be how to define *the poor*. In European countries, to distinguish the poor from the rest of the population, a number of methods using indicators such as income and/or deprivation have developed. When income is used as an indicator, the poor are identified as those whose income falls below a certain income level; while when deprivation is used, the poor are regarded as those who experience deprivation to an extent that society sees as unacceptable.

Thus, the methods used to identify the poor have focused on how to establish a critical level of income or deprivation that separates the poor from the non-poor. In the 20th century research to establish a critical income level developed to a great extent. Rowntree (1901) introduced a method where the level of the income poverty line was established by adding up the price of necessities. Orshansky (1965) generated a poverty line by using the ratio of expenditure on food to total

expenditure. With the method developed by Goedhart *et al.* (1977), the opinion of the population as to their minimum income level played a crucial role in setting the poverty line. Townsend (1979) presented a method where an income threshold was derived from the relationship between income and deprivation. Such efforts mostly favoured income as an indicator in identifying the poor.

Deprivation is a relatively new indicator of poverty. It was not until the pioneering work of Townsend (1979) that it began to be used to identify the poor. Because he thought that an income poverty line could be set at the point where deprivation increases sharply as income decreases, Townsend endeavoured to measure deprivation as well as income. In order to estimate deprivation, he created his own deprivation index and used it to calculate deprivation scores. This meant that although deprivation was not directly used as indicator to identify the poor, it began to be employed in relation to their identification. On the basis of Townsend's work, Mack and Lansley (1985) developed a method where deprivation is the only indicator used to identify the poor.

From Rowntree (1901) to Mack and Lansley (1985), a common feature of efforts to identify the poor is that they are defined by employing either income or deprivation as the sole indicator of poverty. Recently, these conventional methods have been challenged by the argument that using either income or deprivation is not sufficient in estimating the poor. This originates from the belief that income and deprivation reflect different aspects of poverty. Ringen (1988) argues that income primarily indicates one's ability to purchase goods and services, while deprivation reflects one's living conditions. This means that income is not enough to estimate living conditions, while deprivation does not sufficiently reflect purchasing power. Distinguishing an income-based approach relative to purchasing power from a consumption-based approach relative to standard of living, Ringen (1988) emphasises that the two approaches need to be used together in order to measure poverty. Building on Ringen's argument (1988), several methods that combine the two approaches have been presented, as can be seen in the work of Muffels *et al.* (1992), Halleröd (1995b) and Nolan and Whelan (1996).

Identification of the poor in Korea has been heavily influenced by European methods that use income as an indicator to identify the poor. At the moment the

dominant method is the budget standard approach rooted in Rowntree's method (1901). However, we have already noted the significant developments in European methods that employ deprivation or both income and deprivation to identify the poor. It is in this context that this study attempts to identify the poor in Korea using income, deprivation, and both income and deprivation as indicators of poverty, extending the European poverty concept where the poor are defined by income and/or deprivation to the Korean context, where the poor are addressed solely in terms of income. As such, it represents a critical challenge to the tradition of measuring poverty in Korea.

1.2 Purpose of the study

This study aims to explore self-assessment of their own situation by the poor in Korea. In order to do so, it will focus on the following three aspects:

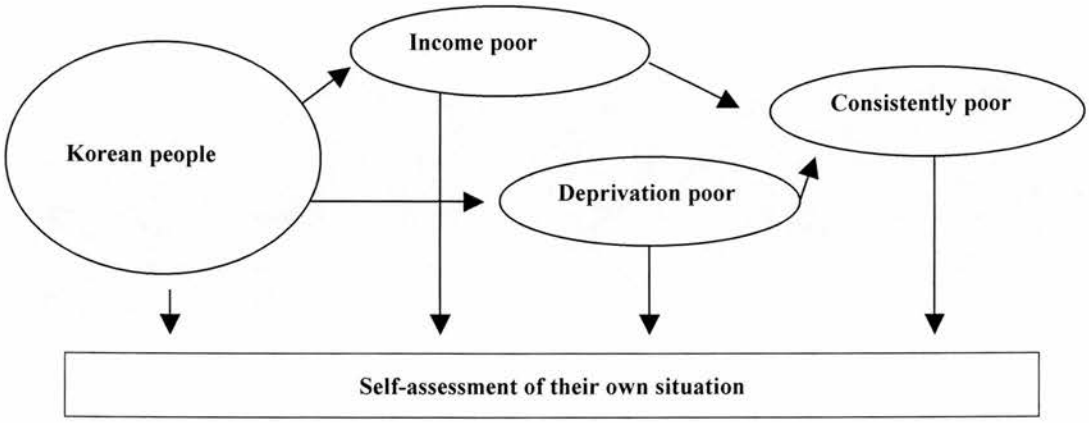
Firstly, it identifies the poor in terms of income and/or deprivation. Therefore the poor are identified in three ways: (1) the income poor, whose income is lower than the 2005 official poverty line set by the Korean government; (2) the deprivation poor, whose deprivation scores are higher than a deprivation poverty line calculated from data obtained by the official Korean poverty survey; and (3) the consistently poor, who are both income poor and deprivation poor.

Secondly, it explores self-assessment by the three kinds of the poor in terms of two points: what does self-assessment by the poor entail (this includes an investigation into whether these three groups think that they are poor), and what has an impact on their self-assessment? The investigation into the former is expected to show how the three groups of the poor assess their situation; while exploration of the latter is expected to give valid information, especially regarding poverty policies related to the effective improvement of self-assessment by the poor, since it covers the extent of the influential impact of variables on self-assessment.

Thirdly, it investigates how Korean households in general assess their own situation. Since the investigation provides information on self-assessment by Korean households in general, it is expected to give an opportunity to compare self-assessment by the poor to that by Korean households in general.

The purpose of this study discussed so far is demonstrated in Figure 1.1.

Figure 1.1 Purpose of the study



1.3 Three significant points for this study

As this study aims to explore self-assessment by the three kinds of the poor in Korea, it was important to deal with the following three points at the outset: firstly, to measure self-assessment by Korean households, which included poor households; secondly, to establish variables that are thought to have an impact on their self-assessment; thirdly, to examine whether or not classifying the poor into these three groups would be worthwhile in the Korean context, as the deprivation poor and the consistently poor have never been discussed in Korea. This point was the basis of the investigation into whether the European-based poverty concept using income and/or deprivation can be applied to the Korean situation. Thus, it was highly desirable to obtain a relevant data set that covered these three points.

As a civil servant in the Ministry of Health and Welfare in Korea (MOHW), I knew that a nationwide survey for the 2005 official poverty line in Korea was scheduled to be conducted by the MOHW in 2004. I thought that it would be a good opportunity to use the 2004 official data set obtained from the survey in terms of two aspects: first, it was intended to measure deprivation as well as income, which was essential information in identifying the poor in terms of income and/or deprivation; second, it was the latest and biggest data set on Korean households. Such a large-scale survey of poverty is expensive and requires a large team of researchers (11 researchers and 200 investigators were directly involved in this survey), so I was

obviously unable to conduct a survey of this scale on my own, and hoped to be able to use the official data set for my study.

However, it was anticipated that a crucial problem would arise in using the official data set as originally conceived, because the original official survey questionnaire was not intended to measure self-assessment. Since neither the Korean researchers nor the Korean government were at all interested in measuring self-assessment by the poor, it was taken for granted that no questions dealing with self-assessment were included in the original survey questionnaire. As I could only use the data set for this study if the necessary questions were inserted into the original questionnaire, I decided to ask someone in charge of the survey to include some questions dealing with self-assessment. I thought my request might be accepted in terms of two considerations: first, there was a need to explore self-assessment by the poor in the Korean situation, and second, the person might consider my request positively because I had worked as a civil servant in the Ministry. Although I had devised 14 questions related to this study, only one of them was inserted into the original questionnaire due to practical limitations. Nevertheless, since it was a key question in measuring self-assessment, this meant that the official data set could be used for this study (see Section 4.1 for details). After the data set was created and the 2005 poverty line was announced on 1st December 2004, I was able to obtain and bring it from Korea in late December 2004.

In order to establish the variables that are believed to impact on self-assessment, I chose and manipulated relevant information in the official data set. However, as the related references were extremely limited, it was very hard to set up appropriate variables. This meant that I had to continuously examine the choice and manipulation of the variables and do a number of regressions, which took months. For the analysis, I used SPSS. In the end, sixteen variables (classified under 5 factors) were chosen and established as the basis for exploring which variables have an impact on self-assessment (see Section 4.2 for details).

Because the deprivation poor and the consistently poor had never been discussed in Korea, I felt that it was important to examine whether it was worthwhile classifying the poor in Korea into these three groups (income poor, deprivation poor and consistently poor) before using the official data set. This meant that I needed to

examine whether the European-based poverty concept of the income poor, the deprivation poor and the consistently poor could be extended to the Korean context. In order to examine the need to classify the poor into these three groups, a one-month pilot survey was carried out in October 2003. The pilot survey indicated that Ringen's argument (1988) that the composition of the income poor differs from that of the deprivation poor would apply to the Korean situation. I took this as confirmation that it would be worth classifying the poor in Korea into the income-, the deprivation- and the consistently poor, and that independent exploration of self-assessment by these three groups would be valuable (see Section 3.5 for details).

Consequently, although this study uses the official data set, I think that my thesis constitutes an original piece of research because I contributed to the official survey, firstly by setting an additional question for the original official survey, and secondly through extensive reanalysis of the aggregate data, which would not be exploited by the Ministry since it is primarily interested in income data. Furthermore, in relation to identification of the poor, this study opens up a debate on whether the deprivation poor and the consistently poor need to be discussed as well as the income poor in the Korean context – and possibly in the Asian context.

1.4 Significance of the study

Several aspects of this study on self-assessment by the poor are likely to be meaningful for poverty research or poverty policies in Korea.

Firstly, this will be the first research in Korea that addresses self-assessment by the poor as well as that by Korean households. While the poor in Korea have been measured primarily in terms of income, the perception of the poor and of Korean households regarding their own situation has not been discussed. Thus far, no research has been done into how the poor or Korean households assess their own situation. In this regard, this study is expected to contribute to producing the first valid information about self-assessment by the poor and Korean households.

Secondly, the investigation into self-assessment of poverty is of particular significance in the political arena. In a democratic society where a number of significant issues are dependent on the opinion of the population, it is taken for granted that self-assessment by the poor, who are the focus of policies on poverty

reduction, needs to be investigated. In this context, findings based on self-assessment by the poor may have a more powerful impact in the political arena than in others.

Thirdly, the investigation into self-assessment of poverty may give some new perspectives on the establishment of poverty policies. Remembering that current policies in Korea have been established in a way that disregards the ideas of the very persons concerned, this investigation may give momentum to the idea that policy-making on poverty needs to be based on the opinions of the Korean people.

Fourthly, classification of the poor into three groups, the income-, the deprivation- and the consistently poor, could have an impact on the tradition of focusing on the income poor in Korea. As neither Korean society nor Korean academia has ever identified the deprivation poor or the consistently poor, conducting an attempt to identify these two groups may have an influential impact on conventional methods in Korea.

Fifthly, an investigation into self-assessment by the poor could be useful in examining whether income and/or deprivation are accurate indicators of the real situation of the poor. When people are identified as poor due to low levels of income and/or high levels of deprivation, it means that their poverty status is dependent on income level and/or the degree of deprivation. Here, considering that people know their own situation best, we can assume that when a number of households classified as income-, deprivation- or consistently poor do not see themselves as poor, income and/or deprivation do not accurately reflect the real situation. Thus, an investigation into how many of the poor actually think of themselves as poor may provide information on which indicator better reflects the real situation. Findings that income is no better at reflecting the real situation than deprivation or both income and deprivation may challenge the way that the poor in Korea are identified using income alone.

1.5 Overview of the chapters

This study is organised into the following chapters:

Chapter 2 reviews previous studies and looks at the history of poverty measurement in Korea, concentrating particularly on how the poor are identified. In the review of previous studies, the studies are arranged according to the classification

used in this study: the income poor, the deprivation poor and the consistently poor. Therefore, methods dealing with establishing an income poverty line to identify the income poor are discussed first, before addressing methods that deal with how to set up a deprivation poverty line to identify the deprivation poor. This is followed by a discussion of methods that use the two poverty lines together to identify the consistently poor. After they have been reviewed, the question of how these methods have been used and applied in Korea is investigated. As only methods of identifying the income poor have been employed in the country, my investigation into the history of identifying the poor in Korea will involve a review of the methods used to establish an income poverty line.

On the basis of the review of the previous studies, Chapter 3 discusses how this study identifies the poor. In order to do so, the chapter begins with a description of the data set used in this study, which was obtained from the official 2004 survey conducted by the Korean government. This was specially designed to produce the income poverty line, and also included a question that I devised to deal with measuring self-assessment. After describing the data set, this chapter discusses how to define the income poor, the deprivation poor and the consistently poor.

Chapter 4 discusses how to measure self-assessment by Korean households, and how to set up variables that are believed to have an impact on these self-assessments. As Korean households include poor households, the measure of self-assessment by Korean households includes an estimation of self-assessment by the poor.

Having presented the methods for identifying the three kinds of the poor, and an outline of how to measure self-assessment by Korean households (which includes self-assessment by the poor) in Chapters 3 and 4, we can now explore self-assessment by the poor. As the exploration of self-assessment by Korean households is a meaningful starting point to explore self-assessment by the poor, Chapter 5 discusses self-assessment by Korean households, and Chapters 6, 7 and 8 respectively deal with self-assessment by the income poor, the deprivation poor and the consistently poor.

Thus, Chapter 5 explores self-assessment by Korean households in terms of how they assess their own situation and which variables have an influential impact

on their self-assessment.

Chapters 6, 7 and 8 deal with self-assessment by the three categories of the poor. In doing so, these three chapters first identify the poor in accordance with the methods discussed in Chapter 3. They then explore how these three groups assess their own situation, and this is followed by an investigation into what has an impact on self-assessment.

Chapter 9 compares the results of the previous four chapters and discusses the implications for poverty policies in Korea.

Chapter 10 concludes and summarises this study, discusses its limitations and then makes some suggestions for further research.

CHAPTER 2. IDENTIFICATION OF THE POOR IN PREVIOUS STUDIES AND IN KOREA

Chapter 2 reviews the main methods used to identify the poor in the past, and then discusses how they have been employed in Korea. The review of the main methods is presented in Section 2.1, while Section 2.2 discusses the history of poverty measurement in Korea. The conclusion of this chapter is presented in Section 2.3.

2.1 Methods of identifying the poor

In order to review the methods used to identify the poor, this study classifies them into three categories according to the use of income and/or deprivation as indicators.[1] The first category is made up of methods that use income as an indicator to identify the poor, which can therefore be said to aim to establish an income poverty line. The second category consists of methods that use deprivation as an indicator, which focus on providing a deprivation poverty line. The third category includes methods that use both income and deprivation as a **dual** indicator of poverty, rather than income or deprivation as **single** indicators.

The reason for classifying methods into these three categories is related to the way that the poor are classified into the three groups in this study: firstly, the income poor, who are identified as poor in terms of income; secondly, the deprivation poor, who are defined as poor in terms of deprivation; thirdly, the consistently poor, who are classified as poor in terms of both income and deprivation. Given the context, it was considered more efficient and effective to classify and evaluate the methods according to the indicator(s) they employed (income and/or deprivation).

Thus, this section is organised as follows. Section 2.1.1 deals with the methods related to producing an income poverty line, which defines the income poor. Section 2.1.2 reviews the methods associated with establishing a deprivation poverty line, which identifies the deprivation poor. Section 2.1.3 examines the methods that combine the two poverty lines and distinguish the consistently poor, who are both the

[1] In addition to low income and/or high deprivation, low consumption (or expenditure) has also been discussed as a key indicator of poverty. Nonetheless, this study focuses on the employment of income and/or deprivation, partly because both consumption (or expenditure) and deprivation relate to living standards, and partly because deprivation provides a more comprehensive representation of an individual's situation than consumption (or expenditure) (Mack & Lansley, 1985: 32).

income poor and the deprivation poor, from the rest of the population. Section 2.1.4 summarises the discussion of these methods.

2.1.1 Methods for producing an income poverty line

The 'traditional' poverty measurement methods separate those in poverty from the rest of the population using an income poverty line (see Rowntree, 1901; Orshansky, 1965; Goedhart *et al.*, 1977; Townsend, 1979; Bradshaw, 1993). According to this convention, the poor are identified as those whose income falls below an income poverty line. Given its importance as a yardstick by which the poor are defined, the key issue in these methods was how to establish an income poverty line, and considerable creativity went into in the various methods used to set an appropriate and convincing poverty line.[2] These methods can be divided into five, depending on how they provide an income poverty line: *basic needs* approaches, a *relative deprivation* approach, a *subjective poverty line*, a *relative income poverty line* and *national minimum income*.

2.1.1.1 Basic needs approaches

As their name suggests, these approaches set an income poverty line as the income level at which basic needs can be met. Thus, the core feature of these approaches is how they define basic needs, how they determine the necessities required to satisfy these needs, and how to transform the basket of necessities into an income poverty line.

These approaches date back to 1901, when Rowntree (1901) estimated poverty in York. In order to measure poverty he introduced the poverty concept of minimum subsistence,[3] which is evident in his definition of primary poverty. He defined those in primary poverty as "families whose total earnings are insufficient to obtain the

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[2] Despite their variety, the common factor in all these methods is that their final indicator for a poverty line is income. This is why they are clustered into this group: methods of producing an income poverty line.

[3] Because it uses the poverty concept of minimum subsistence, an income poverty line set by this method has often been misunderstood as an absolute poverty line (see Townsend(1979)). However, it is incorrect to call an income poverty line based on this method an absolute poverty line, since it is not established as a constant, regardless of time and place (see Veit-Wilson (1986) for details). This means that poverty should be relative, not absolute (Piachaud, 1988: Veit-Wilson, 2001).

minimum necessaries for the maintenance of merely physical efficiency" (p. viii).[4] Thus, to identify those in primary poverty, he needed first to define 'the minimum necessaries for physical efficiency', and then to establish the cost of these necessities. When these costs were compared to the total earnings of the families concerned, those whose total earnings were insufficient to meet their costs could be identified as being in primary poverty.

Food, rent and household sundries such as clothing, light, fuel, etc. were regarded as 'the minimum necessaries for physical efficiency'. The food needed for minimum subsistence level was determined by calculating the daily calorie requirement, and using the estimates of the nutritionist W. O. Atwater to establish the amount of nutrients needed to yield sufficient calories. Once this was done, the next step was to build up a standard diet containing the necessary nutrients. To do this he used Local Government Board data, which provided guidelines for workhouse diets. After establishing a standard diet, he used the lowest prices of its ingredients to calculate minimum food costs. House rent was calculated on the basis of what was actually paid. He also gathered information about the lowest sum of household sundries and then calculated the minimum necessary cost, which allowed "nothing whatever for travelling, recreation, or luxuries of any kind, or for sick and funeral clubs" (Rowntree, 1901:110). In this way, he established the lowest cost of food, rent and household sundries, and then added up the costs to present a primary poverty line.

The advantage of this primary poverty line is that it is derived from a concise theory based on basic needs and scientific rationale, particularly in the case of food costs. Its weakness is that it heavily depends on the researcher's judgement as to what constitutes necessities.

At least two methods have attempted to address this weakness. One follows what is called the multiplier approach (Orshansky, 1965), and the other, the budget standard approach (Bradshaw, 1993).

Unlike Rowntree's approach, which investigates all the necessities, the multiplier approach only considers food in order to set an income poverty line, and

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[4] Rowntree (1901) defined those in secondary poverty as "families whose total earnings would be sufficient for the maintenance of merely physical efficiency were it not that some portion of it is absorbed by other expenditure, either useful or wasteful" (Rowntree, 1901. viii). Because secondary poverty is not related to basic needs approaches, but is involved in the methods that combine the income and deprivation poverty line, it is not discussed here, but argued in section 2.1.3.

thus reduces the researchers' personal judgement as to what constitutes necessities. The choice of food as a core item is based on the assumption that "the proportion of income allocated to "necessaries," and in particular to food, is an indicator of economic well-being" (Orshansky, 1965: 7). In order to establish an income poverty line, this approach uses two kinds of data related to food, food cost and the ratio of food cost to total expenditure.[5] Thus, an income poverty line is generated by multiplying food cost by the inverse of the ratio. In order to calculate food cost, Orshansky (1965) took the standard of nutritional adequacy established by the National Research Council in the United States, and then used food consumption studies prepared by the US Department of Agriculture to determine the quantities and types of food needed. Total food costs were then calculated using the food prices given in the economic plan issued by the Department of Agriculture. The ratio of expenditure on food to total expenditure was derived from data from the 1955 Household Food Consumption Survey, which showed that the average family of three or more persons spent one third of its total income after tax on food. Orshansky calculated an income poverty line by multiplying the cost of food by three, the inverse of the proportion of total expenditure on food by the average family.

As this approach only requires information relating to food, it is simpler than Rowntree's approach, which calls for information on all the necessities required to meet basic needs. However, it has a crucial weakness in that it falls into a circular argument. Because it derives a multiplier of three from the expenditure of *average families*, rather than *poor families*, the income poverty line obtained from the multiplier is only suitable for average families, and not for poor families (Ciro & Michael, 1995). This shows that generating a multiplier for poor families requires information on the expenditure patterns of poor families, rather than that of average families. Therefore, it is necessary to identify poor families in order to establish their expenditure, which brings us to the circular argument that in order to generate a multiplier that will be used to identify the poor, the poor have to be defined in advance.

Unlike the multiplier approach, which focuses on one item (food), the budget standard approach concentrates on establishing all the necessities to determine an

[5] In this regard, this approach can be said to be a method using the Engel coefficient, which is derived from a ratio of food expenditure to total expenditure.

income poverty line. The process of this approach is described in the work of Bradshaw (1993), who notes that:

> the task of those who are drawing up a budget is to decide what *items* are included in the budget, what *quantity* of items are included, what *quality* the item should have, what *price* should be given to it, and where items are purchased intermittently or occasionally, what *lifetime* should be attributed to them (p. 3).

The process of the budget standard approach shows that it is basically the same as Rowntree's approach in considering all the necessities required to satisfy needs. However, although it is the same as Rowntree's approach in principle, they differ in at least two respects. Firstly, the budget standard approach uses the more generous poverty concept of "modest but adequate" (p. 4) as a normative level to satisfy needs, compared with Rowntree's concept of minimum subsistence. Secondly, it employs more advanced knowledge and scientific information, such as data obtained from surveys, to establish what constitutes necessities and resolve related issues such as quantity and price. The employment of them in this approach is fundamentally related to the idea that necessities need to be assessed in an objective manner, and/or avoid researchers' subjective judgement as to what constitutes necessities.[6] However, there is still the difficulty of judging what constitutes necessities (Piachaud, 1987). This is partly because developed skills such as advanced survey methods do not always determine what necessities are included in the budget, and partly because societies are extremely complicated – individual living patterns differ, so determining a standard basket of goods will partly depend on the researcher's judgement. Nevertheless, for the moment at least, the budget standard approach seems popular with both the politicians and the people of Korea, because the principle of establishing the poverty line is simple and convincing.

A common factor in the basic needs approaches discussed above is that their income poverty lines are established on the basis of the necessities required to satisfy basic needs. As a result they share inherent difficulties in defining basic needs and then establishing the necessities required to meet these needs. Since the difficulties with basic needs approaches stem from applying the concept of poverty in relation to

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[6] See Bradshaw *et al.* (1987) for more details on attempts to seek objective methods.

need, it is necessary to introduce a new poverty concept to surmount these chronic difficulties. It was Townsend (1979) who suggested a revolutionary poverty concept and corresponding method that were not based on basic needs. His poverty measurement is discussed in the next section.

2.1.1.2 Relative deprivation approach

Townsend (1979) asserts that "poverty can be defined objectively and applied consistently only in terms of the concept of relative deprivation" (p. 31). On the basis of this idea, he defined poverty thus:

> Individuals, families and groups in the population can be said to be in poverty when they lack the resources to obtain the types of diet, participate in the activities and have the living conditions and amenities which are customary, or at least widely encouraged or approved, in the societies to which they belong. Their resources are so seriously below those commanded by the average individual or family that they are, in effect, excluded from ordinary living patterns, customs and activities (p. 31).

This poverty concept is more comprehensive than that used in the basic needs approach. Through investigation into the relationships between income and deprivation, Townsend established an income poverty line as follows. First, he listed a wide range of resources such as cash income, capital assets, value of employment benefits in kind, value of public social services in kind and private income in kind, translated them into equivalent cash-income values and used these data to confirm household income levels.

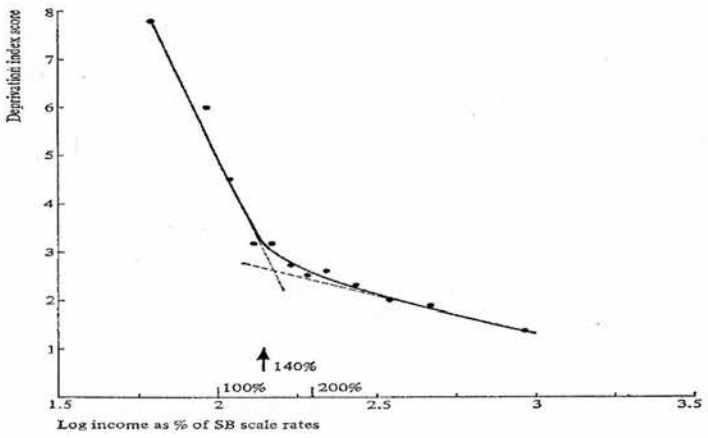
Second, he also collected data on 'style of living' to measure deprivation. He set up 60 indicators representing 'style of living', which covered diet, clothing, fuel and light, household facilities, housing conditions and amenities, conditions at work, health, recreation, education and social relations. These were used to compile an illustrative deprivation index composed of 12 items, as seen in Table 2.1 below. Every household can be given a deprivation score by adding 1 point for each item ticked on the deprivation index.

Townsend then compared the household income level and deprivation score, and drew an income poverty line at the point where income decreases and there is an abrupt increase in the deprivation score, as shown in Figure 2.1 below.

Table 2.1 Deprivation index compiled by Townsend

1. Has not had a week's holiday away from home in last 12 months
2. *Adults only*. Has not had a relative or friend to the home for a meal or snack in the last 4 weeks
3. *Adults only*. Has not been out in the last 4 weeks to a relative or friend for a meal or snack
4. *Children only (under 15)*. Has not had a friend to play or to tea in the last 4 weeks
5. *Children only*. Did not have party on last birthday
6. Has not had an afternoon or evening out for entertainment in the last two weeks
7. Does not have fresh meat (including meals out) as many as four days a week
8. Has gone through one or more days in the past fortnight without cooked meal
9. Has not had a cooked breakfast most days of the week
10. Household does not have a refrigerator
11. Household does not usually have a Sunday joint (3 in 4 times)
12. Household does not have sole use of four amenities indoors (flush WC; sink or washbasin and cold-water tap; fixed bath or shower; and gas or electric cooker)

Figure 2.1 Modal deprivation by logarithm of income as a percentage of supplementary benefit scale rates (Townsend, 1979:261)



Townsend's contribution to poverty measurement cannot be over-emphasised. His definition of poverty helped broaden the narrow concept of poverty as defined in minimum subsistence, and his method had an influential effect on subsequent poverty measurements, such as those developed by Mack and Lansley (1985), Nolan and Whelan (1996), Gordon and Pantazis (1997a; 1997b) and Pantazis *et al.* (2006). Above all, his method of using a deprivation index to measure deprivation demonstrated the possibility of using deprivation to measure poverty.

Nevertheless, his approach has been criticised on several points. Regarding his method, Piachaud (1981) argues that, first, the issue of taste is not fully considered in setting up the deprivation index. Second, more importantly in terms of an income poverty line, he questions the existence of the critical point Townsend identified as a

poverty line. Piachaud (1981) states that:

> the combination of two factors - that there is diversity in styles of living, and that poverty is relative - mean that you would not, in fact, expect to find any threshold between the poor and the rest of society. Townsend's hypothesis that such a threshold would exist is intrinsically implausible (p. 421).[7]

Mack and Lansley considered the first criticism in their study of 1985. Their study is discussed in Section 2.1.2 below, which deals with deprivation poverty lines, since their main concern was to set up a critical deprivation score in order to define the poor in terms of deprivation, rather than generating an income poverty line.

In contrast to basic needs approaches and the relative deprivation approach, some distinct methods using subjective perception have been developed. The next section discusses these methods.

2.1.1.3 Subjective poverty line

Researchers in The Netherlands have played a major role in developing approaches that use subjective perception in generating an income poverty line to identify the poor, suggesting methods for translating public perception into an income poverty line. The key issues of these methods can be narrowed down to two points: first, how to elicit public perception, and second, how to convert it into an income poverty line.

There are two methods for measuring public perception. One is to find out people's opinion regarding the minimum income necessary for a standard household or family, rather than for themselves. Rainwater (1974) showed how public perception of a minimum income for a standard family can be used to provide an income poverty line, on the basis of a question included in the US Gallup poll: "What is the smallest amount of money a family of four (husband, wife, two children) needs to get along in this community?" (p. 52). By analysing responses to this question collected between 1946 and 1969,[8] Rainwater (1974) found that the mean income required to 'get along' was in the range of 46% to 58% of disposable

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[7] With regard to the debates on whether or not the poverty line existed, Desai (1986) and Desai and Shah (1988) argued its existence, whilst Piachaud (1987) did not accept Desai's conclusion. Nolan and Whelan (1996) said that they did not discover a Townsend-type poverty line when their own data was analysed.

[8] Analysis of this period used twenty-one surveys from 1946 to 1969, excluding those for 1955, 1956, 1959, 1965, 1966 and 1968. Two surveys were employed for the years 1947, 1951 and 1969 (p. 53).

family income (pp. 52-53). This method uses data obtained from opinions regarding the minimum income for a standard household or family. While it is possible to obtain a relatively objective judgement on the minimum income with this approach, the credibility of the data is undermined by the fact that it is obtained from guesses about the income required by other households.

The second method involves people estimating the minimum income of their own household or family. Although it is the same in that a subjective opinion on minimum income for their own households or family is used to present a poverty line, there are three ways in which the perception is turned into a poverty line.

The first is called the Leyden poverty line, or LPL. A core concept of the LPL is use of the individual welfare function of income (WFI) to indicate the relationship between welfare (or utility) and income (Van den Bosch, 2001). Van Praag (1968) postulated that individuals could evaluate income levels within a finite interval. Based on this assumption, the following or similar Income Evaluation Question (IEQ) can be used to generate WFI: "Which after tax monthly income would you, in your circumstances, consider to be: Very bad? Bad? Insufficient? Sufficient? Good? Very good?" (Kapteyn *et al.*, 1988: 225). A WFI is produced by translating the verbal labels "very bad" to "very good" into a numerical welfare evaluation on a zero-one scale, with six intervals corresponding to the number of verbal labels in a given question. The WFI now can show the relationship between individual welfare from "very bad" to "very good" and the corresponding income. However, the limitation of the WFI in producing a poverty line is that it is just a function showing the relationship between welfare and income, and cannot produce a poverty line itself. Thus, to set a poverty line, a certain welfare level must be selected in advance, and a poverty line is then generated at an income level corresponding to the chosen welfare level. Because of this feature, Van den Bosch (2001) states that "Whether the income thresholds corresponding to certain welfare levels can be regarded as poverty lines is a matter of choice. The developers of the LPL have usually assigned this task to politicians" (p. 97).

The LPL using WFI therefore has the advantage of producing a number of poverty lines corresponding to various welfare levels, depending on a political decision. The drawback is that judgement on the welfare level relies heavily on an

arbitrary decision (Van den Bosch, 2001).

In contrast to the LPL, which uses the WFI, the subjective poverty line (SPL)[9] uses the relationship between actual income and perceived minimum income to establish a poverty line. Minimum income is measured by Minimum Income Questions (MIQ) such as "Which after tax monthly income do you, in your circumstances, consider to be absolutely minimal? That is to say that with less you could not make ends meet" (Kapteyn *et al.*, 1988: 223). Although the exact wording of MIQs may vary, they are all used to obtain respondents' opinions about the minimum income required to make ends meet in their own household or family. In terms of establishing an income poverty line, the relationship between actual income and minimum income obtained from MIQs can be formulated by the equation: $\ln Y_{min} = \alpha_0 + \alpha_1 \ln Y + \alpha_2 \ln Fs$, where $\ln Y_{min}$ is the natural log of the minimum income, $\ln Y$ is the natural log of the actual income, $\ln Fs$ is the natural log of the family size and α_0 is an intercept, α_1 and α_2 are regression coefficients which can be obtained by regression of income and family size (Hagenaars, 1986; Kapteyn *et al.*, 1988; Halleröd, 1995a; Van den Bosch, 2001). A poverty line is generated at an income level where the actual income ($\ln Y$) is equal to the minimum income ($\ln Y_{min}$).

There is another subjective poverty line, CSP-line,[10] which is derived from particular samples of respondents rather than an entire sample (Deleeck *et al.*, 1992). This is based on the notion that only households that are just able to balance their budget are able to give a correct estimate of a poverty line, while households whose incomes are either above or below the minimum level are biased due to differences in style of living when estimating a poverty line (p. 38). Households were considered to be just able to balance their budget if their response to the question "With your current monthly income, everything included, can you get by: with great difficulty, with difficulty, with some difficulty, fairly easily, easily, very easily, for your household?" (p. 38) was "with some difficulty". Thus, a poverty line was presented by averaging the households' income.

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[9] There is some confusion about SPL terminology. For example, Saunders (2002) distinguishes between subject poverty relevant to people's direct assessment of their own poverty status, and consensual poverty relevant to SPL. In this study, subjective poverty line means the line derived from Minimum Income Question; therefore, it is the same as the poverty line derived from Saunders' consensual poverty.

[10] CSP stands for Centre for Social Policy, University of Antwerp.

The strengths of the SPL and CSP-line are that the respondent's opinion is directly employed to present a poverty line, and the process of establishing a poverty line is very simple and convenient. However, it has been pointed out that people's concepts regarding minimum income may vary (Piachaud, 1987). For example, some may consider only their cash income when answering questions about minimum income, while others may include other resources. In addition, the notion of 'making ends meet' or 'with some difficulty' does not necessarily mean poverty (Gordon, 2000). Thus, Gordon (2000) emphasises that a more obvious expression should be used to refer to poverty instead of euphemisms like 'making ends meet'.

Townsend *et al.* (1997) and Gordon (2000) used more direct questions than the MIQ in order to construct a subjective poverty line. Aiming to establish two poverty lines, an absolute and an overall poverty line,[11] Townsend *et al.* (1997) asked respondents two questions:

> How many pounds a week, after tax, do you think are necessary to keep a household such as the one you live in, out of ABSOLUTE poverty? How many pounds a week, after tax, do you think are necessary to keep a household such as the one you live in, out of OVERALL poverty? (pp. 10, 12). [12]

The poverty lines for absolute or overall poverty were suggested as the mean of the amount that respondents felt would keep them out of poverty. One feature of this approach is that respondents are asked to give an appropriate amount required to avoid poverty, rather than the minimum income to make ends meet. Thus, an income poverty line generated by this approach refers more directly to the income level at which respondents think they can avoid poverty. However, this does not seem to completely solve the problem with the SPL, as it is assumed that respondents have difficulty in estimating the amount needed to avoid absolute or overall poverty. In this regard, Gordon (2000) admits that about twenty per cent of respondents in the study had difficulty in giving a valid response to the two questions.

So far we have discussed the methods that use basic needs, relative deprivation and public perception to establish an income poverty line. These methods present a poverty line based on a theoretical rationale of why the income poverty line should

[11] The classification of absolute and relative poverty in these studies follows that of the 1995 World Summit on Social Development in Copenhagen (Townsend *et al.*, 1997: 7).
[12] These were also used by Gordon (2000: 77).

be generated at a certain income level. Basic needs approaches identify an income poverty line as a normative level at which basic needs can be satisfied. Relative deprivation approaches establish the income poverty line as the level below which the degree of deprivation is so serious that people cannot lead a typical life in a society. The subjective poverty line provides a critical income level derived from society's opinion regarding the minimum income level required to 'make ends meet', 'get along', etc.

Two other methods are worth discussing in relation to establishing an income poverty line, although they are not based on such theoretical rationales. These methods, which present a relative income poverty line and a national minimum income level, are briefly considered in the next section.

2.1.1.4 A relative income poverty line and national minimum income

A relative income poverty line uses the extent of distribution of income in a society to set up a poverty line. An example of this would be a poverty line derived from, say, 50% or 60% of the mean or the median income of the population in question.[13] The advantages of this approach are that the poverty line can be drawn very easily provided income data is given, and that it can be self-updated when updated income data is obtained. This enables researchers to make a convenient comparison of poverty between societies. However, as noted above, the weakness of this method is the lack of theoretical rationale as to why a certain percentage of the mean or the median income should be chosen for an income poverty line.[14]

The national minimum income level refers to a kind of income level set by formal institutions such as parliament or government in order to protect the poor. The level at which it is set is influenced by political considerations such as budget feasibility, rather than scientific rationale (Veit-Wilson, 1998). Thus, a national minimum income level derived from political decisions is distinguished from an

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[13] In relation to measuring poverty, the Cumulative Poverty Index (CUPI) (Sallila *et al.*, 2006) is worth noting, since it shows "the depth of poverty and the number of people living in poverty" (p. 107). However, in terms of establishing an income poverty line, as the CUPI does not produce an income poverty line but uses a cut-off ratio, 2.5 times less than average income, it can be said to use a kind of relative income poverty line.

[14] According to Piachaud and Webb (2004), budget standards and a relative income poverty line such as 60% of median income can be used to complement each other. See section 6.3.3.1 for a comparison of budget standards and a relative income poverty line in Korea.

income poverty line established by methods based on some theoretical rationale. Differentiating it from an income poverty line, Veit-Wilson (1994; 1998) calls this 'minimum income standards' (MIS).

Having discussed the methods for presenting an income poverty line, I will consider deprivation as another important indicator in identifying the poor.

2.1.2 Methods for establishing a deprivation poverty line

While considerable progress has been made in developing methods of presenting an income poverty line, much less work has been done on setting up a deprivation poverty line. Indeed, the very term may be unfamiliar. However, if it is possible to determine a particular level of income that can be regarded as an income poverty line which distinguishes the poor from the rest of the population in terms of income, it should also be possible to determine a corresponding deprivation score separating the poor from the rest of the population in terms of deprivation.

Explicit use of the term 'deprivation poverty line' appears in the work of Muffels *et al.* (1992), in the form of a subjective deprivation poverty line. However, it was Mack and Lansley (1985) who first used a deprivation poverty line to identify the poor, although they did not use this specific term.

Mack and Lansley (1985) developed a new approach to estimating deprivation based on Townsend's work (1979) and addressing some of the criticism directed at his method, such as failure to take account of taste in setting up a deprivation index. As a point of departure in measuring the deprivation poor, Mack and Lansley (1985) defined poverty as "an enforced lack of socially perceived necessities" (p. 39).

By definition, they needed to investigate what constituted 'socially perceived necessities' and 'an enforced lack of them'. In order to define socially perceived necessities, they selected thirty-five items as representative of the social and personal life of a household, and then, unlike Townsend, asked people whether or not they viewed each item as a necessity. An item was only confirmed as a necessity if over 50% of respondents regarded it as such. As a result, twenty-six items were set as necessities.[15]

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[15] Twenty-two of the twenty-six necessities were used in the analysis of identification of the poor. Three of the four excluded items (public transport, self-contained accommodation and garden) were removed because there was no significant correlation with income, and the remaining item (television)

They also needed to take account of taste so that they could distinguish between enforced lack of necessities and lack of necessities due to choice. To control taste, they asked respondents who said they did not possess certain necessities whether this was due to choice or inability, classifying the latter as an enforced lack. This enabled them to obtain information about enforced deprivation of necessities in each household. In order to convert this information into deprivation scores, one point was given for each necessity missing through need rather than choice, and the scores were added up to generate a deprivation score for each household.

Mack and Lansley could now use the deprivation scores to identify poor households. While Townsend's study (1979) used the relationship between income and deprivation to set an income poverty line, Mack and Lansley (1985) used only deprivation scores to define the poor. They established a lack of three or more necessities as a deprivation poverty line, on the grounds that:

> *A level of lack of three or more necessities is, by contrast, overwhelmingly enforced.* Very few of the better-off lack this level of necessities. And nearly all those who lack this level of necessities cut back on non-necessities, a majority cutting back substantially (p. 176).

This approach, which considers public perception regarding necessities and takes account of taste, has been very influential in measuring deprivation (Gordon, 2000; Gordon *et al.*, 2000).[16] However, the decision to set the deprivation poverty line at the level where three or more necessities are lacking has been criticised (Piachaud, 1987; Nolan & Whelan, 1996). Piachaud (1987) points out that the lack of only one item might indicate poverty if it was classified as a necessity, while Nolan and Whelan (1996) argue that the choice of a particular level on the deprivation scale was problematic as it means that poverty is assumed to be one dimensional, even though it is multi-dimensional.

Arguing that poverty is multi-dimensional, Nolan and Whelan (1996) advanced a more developed method of measuring deprivation than Mack and Lansely (1985). Taking as their point of departure the definition of poverty as

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was taken out due to the impossibility devising a significant test from small samples. The twenty-two items were divided into two groups of eighteen items, in order to examine deprivation in household with and without children's items (Mack & Lansley, 1985).

[16] Mack and Lansley's method (1985) was replicated in the work of Gordon and Pantazis (1997) and Gordon (2000), and employed by Callan *et al.* (1993) and Nolan and Whelan (1996).

"exclusion arising from lack of resources" (p.115), they used twenty-four items to identify the poor in terms of deprivation. These items, which were selected on the basis of the studies by Townsend (1979) and Mack and Lansley (1985), were set up by researchers (pp. 74, 82) and divided into three factors using statistical factor analysis[17]: a basic index with 8 items such as food and clothes, a secondary index with 9 leisure and activity-related items, and a housing index with 7 items related to housing quality and facilities.[18] Further analysis of the three indices generated a basic index as an indicator of generalised deprivation, i.e. pervasive exclusion from the customary life of a society. With analysis of the basic index, they also suggested that a score of 1, showing that an item in the basic index was lacking, should be used to indicate generalized deprivation. This means that a score of 1 serves as a deprivation poverty line in identifying the deprivation poor.[19] Using the score of 1 in the basic index as an indicator of generalised deprivation was justified on two counts: on a conceptual level, by the argument that "genuinely enforced deprivation of even one socially defined necessity should be sufficient to indicate such pervasive exclusion" (p. 122); and on a practical level, by the argument that the presence or absence of one of the eight items in the basic index was not crucial in terms of the extent of the poverty rate. Arguing that "For all other estimating seven rather than eight indicators, the poverty rate remained in the range of 15 to 16 per cent. Our conclusions relating to the extent of poverty thus remain extremely robust---" (p. 123), they concluded that the basic index could be regarded as the very index to indicate generalised deprivation, and that a lack of any one item in the basic index indicated deprivation.

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[17] The items for each factor are as follows (Nolan & Whelan, 1996: 88).

Factor 1: Basic items: Go without heat, Go without substantial meal, Arrears/debt, New not second-hand clothes, Meal with meat/chicken/fish, Warm waterproof overcoat, Two pairs of strong shoes, Roast or equivalent weekly

Factor 2: Secondary items: Annual holiday away from home, Able to save regularly, Daily newspaper, Telephone, Hobby or leisure activity, Central heating, Presents for friends/family yearly, Car, Afford afternoon/evening out

Factor 3: Housing items: Bath or shower, Indoor toilet, Washing machine, Refrigerator, Colour TV, Dry damp free dwelling, Heating for the living room

[18] The classification of necessities into 3 factors shows that they measure deprivation on the basis that poverty is multi-dimensional.

[19] When it is considered that the score of 1 is derived from the notion that poverty is multi-dimensional, strictly speaking, labelling the score of 1 as a deprivation poverty line may not be appropriate. However, since a primary purpose of the score of 1 is to define the poor in terms of deprivation, this study regards it as a kind of deprivation poverty line in this respect.

Nolan and Whelan's (1996) method offers a good opportunity to identify the poor in terms of deprivation, especially on the basis of the concept of multi-dimensional poverty. Nevertheless, the decision to choose the lack of one item in the basic index as a critical point indicating generalised deprivation seems problematic. In my view, the secondary index and housing index may also contain items that could be included in the basic index, such as a telephone, an indoor toilet or a refrigerator. This means that although households are not deprived of items in the basic index, they may suffer generalised deprivation if they are deprived of basic items in the secondary or housing index. Therefore, selecting the score of 1 from the basic index can be problematic in identifying the deprivation poor.

Although the methods developed by Mack and Lansley (1985) and Nolan and Whelan (1996) differ in identifying the deprivation poor, they share a common factor in that the critical level separating the deprivation poor from the rest of the population is established by analysis of data related solely to deprivation.

While these two methods rely entirely on analysis of household deprivation to establish the critical deprivation score used to identify the deprivation poor, Muffels *et al.* (1992) added another criterion, subjective perception. They presented several steps in setting up a deprivation poverty line. The first step is to generate a consumption welfare level, which is obtained by setting up a consumption index composed of forty-five items that reflect "various dimensions of living conditions" (p. 195). Deprivation index scores are derived from the consumption index, and the consumption welfare level is calculated by the inverse of the deprivation index scores.

The next step is to obtain a subjective assessment of actual living conditions by asking the following question:

> If you consider the way in which your household lives at the moment, would you consider your household as poor, or in fact as rich, or as somewhere in between? You may answer by giving a score to your situation. A score of 1 means that you consider your household as being very poor, a number of 10 means that you consider your household as being very rich (p. 195).

A score of 5.5 was selected as a critical point in the range from 1 to 10 for generating a deprivation poverty line, like the school mark in The Netherlands that distinguishes a satisfactory perception from an unsatisfactory one. Then, a

deprivation poverty line was set up where the consumption welfare level was evaluated with the score of 5.5. In this regard, this approach can be said to be a version of a subjective poverty line in terms of deprivation. Compared to the methods of Mack and Lansley (1985) and Nolan and Whelan (1996), this approach has the advantage that a deprivation poverty line is evidently established, since the subjective assessment is used to determine a critical deprivation score. However, using a score of 5.5 as a critical point between unsatisfactory and satisfactory perception, as done in schools in The Netherlands, is likely to be problematic, partly because an unsatisfactory perception, which relates to "inward-looking" (Mack & Lansley, 1985: 167), does not necessarily mean poverty, and partly because it is not convincing to apply the meaning of a school mark directly to generating a deprivation poverty line.

Section 2.1.1 and 2.1.2 discussed the methods for presenting an income and a deprivation poverty line. The next section deals with how these methods have been combined to identify the poor.

2.1.3 Methods for combining an income poverty line and a deprivation poverty line

As discussed in Section 2.1.1 and 2.1.2, an income poverty line identifies as poor those falling below a certain income level, while a deprivation poverty line regards those experiencing more than a certain deprivation level as poor. When people can be identified as poor using either the income or the deprivation poverty line, an important question arises: are people who are identified as poor by an income poverty line the same as those who are defined as poor by a deprivation poverty line? If there is no significant discrepancy between the poor identified by either the former or the latter, it would not matter which type of poverty line is used in measuring the poor. However, this is not likely to be the case. Muffels *et al.* (1992) showed the results of analysis of socio-economic panel data in The Netherlands in 1988 where the percentage of non-deprived poor among the income poor could amount to 77%. In the analysis of the 1992 Swedish Standards of Living survey data, Halleröd (1995b) showed a result consistent with that of Muffels *et al.* (1992): among the poor identified in terms of income, only 42% were also defined as poor in terms of

deprivation. Such a large discrepancy between the income poor and the deprivation poor implies that income and deprivation are quite disparate indicators in the identification of the poor. The difference between the two indicators in measuring the poor shows that, on their own, neither may be sufficient to reveal the real profile of poverty in a given society.

It was Ringen (1988) who laid a theoretical cornerstone, proposing that the two indicators should be distinguished and used together in measuring the poor. Ringen (1988) divided approaches to measuring the poor into an indirect (income-based) approach and a direct (consumption-based) approach, emphasizing that the two approaches should be employed together in poverty measurement. On the basis of this argument, Ringen (1988), Nolan and Whelan (1996), Muffels *et al.* (1992) and Halleröd (1995b) presented a method that combined the two indicators in order to measure the poor. Before discussing these studies, however, we need to turn our attention back to the study of Rowntree (1901), who had already combined an indirect and a kind of direct approach to identifying the poor more than a century before.

Rowntree (1901) defined those in secondary poverty as "families whose total earnings would be sufficient for the maintenance of merely physical efficiency were it not that some portion of it is absorbed by other expenditure, either useful or wasteful" (p. viii). By comparing the definitions of primary poverty (see Section 2.1.1.1) and secondary poverty, it can be inferred that although the poor in secondary poverty spend some money on other expenditure, thus taking their allocated income for maintaining physical efficiency below a primary poverty line, their original income is higher than the primary poverty line. This means that Rowntree (1901) could distinguish the poor in secondary poverty from those whose income is higher than the primary poverty line. How then could he distinguish them?

In order to do so, he took the following steps. Firstly, he identified as poor those in 'obvious want and squalor', who constituted all the poor – both those in primary poverty and those in secondary poverty. In other words, identification of the poor, regardless of whether they were in primary or secondary poverty, was determined by the investigators' judgement as to whether people's external appearance indicated 'obvious want and squalor'. Secondly, he calculated the

number of those in primary poverty among the total number of poor, using the primary poverty line derived from the concept of minimum subsistence. Thirdly, he obtained the number of those in secondary poverty by subtracting the number of those in primary poverty from the total number of poor. With regard to Rowntree's procedure (1901) for identifying the poor, Veit-Wilson (1986) summarises Rowntree's poverty concept (1901) as "$\sum$P minus P1 leaves P2", where $\sum$P refers to the total number of the poor, P1 to those in primary poverty and P2 to those in secondary poverty, emphasising that "his procedure was not P1 plus P2 totals $\sum$P " (p. 77).[20]

Thus, from his poverty concept, it becomes obvious that he thought that people in primary poverty were those suffering from both low income and 'obvious want and squalor', which can be said to refer to a kind of low standard of living or deprivation; while people in secondary poverty were those in 'obvious want and squalor', but with sufficient income to meet a primary poverty line. This means that those with a low income but a high standard of living, i.e. those not experiencing 'obvious want and squalor', were not identified as poor. Consequently, as seen in Table 2.2 below, Rowntree's poverty concept shows that he used the two aspects of poverty – income and standard of living (or deprivation) – to define the poor.

Table 2.2 The poor according to Rowntree's poverty concept (1901)

	Low standard of living (appear to be in want and squalor)	High standard of living (do not appear to be in want and squalor)
Income Below primary poverty line	Primary poverty	Non-poor
Income Above primary poverty line	Secondary poverty	Non- poor

Although Rowntree (1901) used income and a certain standard of living as indicators, it was Ringen (1988) who explicitly used the combination of the two aspects of poverty to measure the poor. As discussed earlier, Ringen (1988) emphasised that the indirect approach based on income aspects and the direct approach based on consumption aspects should be employed together to measure the poor. As a result, he viewed as poor those in general deprivation, which is

[20] The process is also summarised in the work of Stitt and Grant (1993).

"characterised by both a low standard of consumption and a low level of income" (p. 361). This definition shows that he needed to measure what constituted a low standard of living through the direct approach, and a low level of income through the indirect approach. To estimate these two levels he employed consumption deprivation, made up of seven items, as a direct approach, and chose a relative income poverty line as an indirect approach. He then demonstrated that there were significant discrepancies in the outcome of poverty measurement employing an indirect approach alone and the use of both approaches.[21]

Unlike Ringen's work (1988), which only showed the differences, Nolan and Whelan (1996), Muffels *et al.* (1992) and Halleröd (1995b) measured the poor using both an income poverty line as an indirect approach, and a deprivation poverty line as a direct approach.

Nolan and Whelan (1996) combined a relative income poverty line and a deprivation poverty line, which showed that the subject lacked one item in the basic index (see Section 2.1.2). Combining the two poverty lines, they classified people into four groups: (1) consistently poor, with both a low income and a low standard of living;[22] (2) deprivation poor *only*, with a low standard of living but not a low income; (3) income poor *only*, with a low income but not a low standard of living; (4) consistently non-poor, with both a high income and a high standard of living.

Muffels *et al.* (1992) also took both approaches into account when distinguishing the poor from the non-poor. However, their study was based on using public perceptions in setting up both an income and a deprivation poverty line. The former was established through a subjective poverty line (see Section 2.1.1.3), and the latter through a subjective deprivation poverty line (see Section 2.1.2)

Halleröd (1995b) also used the two approaches to define the poor. However, he did not directly produce a deprivation poverty line, establishing only a subjective income poverty line for identifying the income poor. Providing an income poverty line alone meant that he needed another method to identify the deprivation poor. He elected to use a percentage of the income poor to do this. In his work, as the income poor identified by a subjective poverty line amounted to 21.3%, the deprivation poor

[21] He did not provide a deprivation poverty line as his purpose was to present the differences between the two approaches.

[22] This study uses this terminology with the same meaning.

was set at the same percentage of 21.3%. The reason why he defined the deprivation poor in this way was related to the purpose of his study, which was "to compare and finally combine the result from indirect and direct consensual definitions of poverty" (p. 121).

2.1.4 Conclusion

So far, we have discussed various methods that have been presented to identify the poor. Unfortunately, however, as seen in the debate between Sen (1983; 1985) and Townsend (1985), and as Sutherland *et al.* (2003) confirm, no agreed method of identifying the poor has been offered yet, nor is one likely to be provided in the future.[23] In this situation, it seems that the adoption of a certain method of defining the poor cannot help but depend on the purpose of the study and on social conditions in a given society, particularly the political and economic situation. In underdeveloped countries, where most people experience severe poverty, it would not be proper to identify the poor using the deprivation index method; while in fully developed countries, where most of the population does not experience severe poverty, the method based on minimum subsistence would not be appropriate. Thus, the adoption of a specific method of measuring poverty can be said to be a matter of choice, considering the purpose of the study and social conditions.

However, the freedom to select a method does not necessarily mean that an indirect and a direct approach do not need to be combined. Rather, considering that the composition of the income poor identified by an indirect approach alone differs considerably from that of the deprivation poor identified by the direct approach alone, it is worth discussing in more depth the combination of the two approaches in order to identify those living in poverty in a society.

2.2 Poverty measurement in Korea

This section addresses the history of poverty measurement in Korea. As this has been done using the methods to establish an income poverty line discussed in Section 2.1.1.1, this discussion of the history of poverty measurement in Korea can be said to

[23] Spicker (1998) classifies the definition of poverty into eleven groups. Considering that methods of measuring poverty are dependent on the definition of poverty, we can infer that it is implausible to present an agreed method.

be a review of how the methods of setting an income poverty line have been employed in this country.

Since the political and economic situation in Korea have had a significant impact on poverty measurement in the country, it would be useful to introduce the nation in terms of politics and economy before discussing how poverty is measured there.

2.2.1 Introduction to the nation of Korea

Korea, a distinct nation in East Asia with a history spanning more than 2000 years, was annexed to Japan in 1910. After that, Korea was occupied by Japan for over 35 years until the 1945 liberation when Japan was defeated in World War II. Although Korea was freed from Japanese occupancy on 15th August 1945, a new tragedy began due to the fact that the liberation was not achieved by the Korean people but by foreign countries, especially the US and the USSR. Korea now was under the influence of these two countries (Lee, 2003). Together with divisive conflicts between those Koreans in favour of capitalism and those in favour of socialism, the influence of both countries played a crucial role in dividing Korea in two: South Korea supported by the US, and North Korea supported by the USSR. In the end, the government of South Korea, the regime of Seung-Man Rhee, was established on 15th August 1948, while that of North Korea, the regime of Il-Sung Kim, was established on 9th September 1948. Sharp conflicts between both regimes due to the Cold War eventually resulted in the outbreak of the Korean War on 25th June 1950. Although the war ended with a cease-fire agreement in 1953, it resulted in the permanent division of Korea.

From the establishment of the government until the 1960s, South Korea experienced extreme political chaos due to resistance to the dictatorship of the regime of Rhee, the first president of South Korea. In the midst of this disorder, the 4.19 revolution[24] in 1960 occurred against Rhee's government, leading to its collapse. After that, the regime of Jang-Myeon was established on the basis of the Korean people's desire for complete democracy. However, the political situation was still chaotic due to the Korean's inexperience of democracy.

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[24] So named because it occurred on 19th April 1960.

In 1961, General Jeong-Hee Park carried out a military coup d'état and took the reins of government. Once again South Korea fell under a dictatorial government. His dictatorship came to an abrupt end when Park was assassinated by his right-hand man, Jae-Gyu, Kim, on 26th October 1979. His death resulted in another military coup d'état by General Doo-Hwan Jeon on 12th December 1979. Korea was again under a dictatorial government.

Resistance to the dictatorship continued from 1961, when Park carried out his coup d'état, to 1987, when it culminated in a huge demonstration all over South Korea. As a result of the demonstration, the Korean Constitution was revised so that the president of South Korea should be directly elected by the Korean people's vote. Under the amended Constitution, there were four democratic and peaceful presidential elections in 1987, 1992, 1997 and 2002. These four elections demonstrated that South Korea has achieved democracy.

Despite the political upheavals, the South Korean economy continued to achieve relatively constant economic growth. Just after the 1945 liberation, Korea was one of the poorest countries in the world, and almost all of its population experienced poverty. However, as a result of the intensive promotion of key industries by its governments, Korea achieved striking economic growth. Per capita GNP increased from $82 in 1961 to $650 in 1976 and $10,076 in 1995. However, the governments' intensive promotion of economic growth produced severe adverse side effects, such as inequality and a corrupt relationship between political and business circles. In 1997 these adverse effects led to a severe economic crisis, to the extent that the Korean government had to seek help from the IMF. Although the crisis was completely overcome by 2002 when the government repaid all the relief money (with GNP per capita of $10,013), the vestiges of dictatorial governments are likely to still have an adverse effect on the Korean economy.

2.2.2 Poverty measurement in Korea

On the basis of the foregoing introduction, this section examines poverty measurement in Korea in terms of two aspects: the Korean government sector on the one hand, and academia on the other. However, as the former have led poverty measurement, the primary focus will be on measurement by the government sector,

while an additional review will be done on measurement in academia.

This study reviews poverty measurement, looking at the three main stages in the development of poverty measurement: a foundation period between 1945 and 1972, an initiatory period between 1973 and 1986, and a developmental period from 1987 to the present.

2.2.2.1 Foundations of poverty measurement (1945 to 1972)

During the period between 1945 and 1972, Korea was in political upheaval, and although the government initiated economic development its economic status was poor. This meant that social welfare, including poverty measurement, was not an important agenda item during those times. In a situation where more than 60% of the population experienced severe poverty (Park, 1994), the government was reluctant to estimate poverty. This was partly because revealing the prevailing poverty would adversely affect the regimes, which already lacked legitimacy, and partly because the government could not sufficiently protect the population in any case. Thus, the government never made any official attempt to measure poverty in this period (Kim, 1997). Instead, from 1966 onwards the government set up administrative standards that would enable it to determine a benefit level in order to protect the extreme poor (Kim, 1990).

Outside the government sector, there was the first trial to measure poverty. The National Textile Union (NTU) generated an income poverty line in 1969 in order to suggest a guideline for wage negotiation (Ahn, 1988).

2.2.2.2 Initiation of poverty measurement (1973 to 1986)

In political terms, the period between 1973 and 1986 was as difficult for Korea as the period between 1945 and 1972. Resistance to the dictatorial government had almost reached a climax. However, by the second period Korea had achieved outstanding economic development due to the success of the heavy and chemical industries initiated by the government.

Remarkable progress was also made in poverty measurement by both the government sector and academia. In 1973, the government officially estimated poverty for the first time using the multiplier approach (see Section 2.1.1.1) (Kim *et*

al., 1999). The Social Security Committee (SSC) in the Ministry of Heath and Social Affairs, the predecessor of the MOHW, conducted a survey of 1,162 households regarding their living patterns between September 1973 and April 1974. From the survey, the SSC generated food costs for a standard, five-member household composed of two adults and three children, as well as a ratio of food expenditure to total expenditure in the standard household (Ahn, 1988). The SSC then provided an income poverty line by multiplying food costs by the ratio. The second estimation was done in 1978 by the same institute using the same method (Kim *et al.*, 1999).

Some poverty measurement was also undertaken in academia. Seo (1979) and Jang (1986) conducted research using the multiplier approach in 1973 and 1984 respectively, and Yun (1994) generated a subjective poverty line in 1981.

2.2.2.3 Development of poverty measurement (1987 to 2006)

This period has two distinguishing features in terms of politics and economy. In the realm of politics, the end of military government in 1987 when a huge demonstration took place constituted a great achievement. However, economic growth remained rather stagnant, and Korea experienced an economic crisis in 1997 due to the accumulated adverse effects of economic promotion initiated by the government. Although a full recovery had been made by 2002, the gap between the rich and the poor deepened in the course of surmounting the crisis (Yu & Lee, 2000).

During this period the budget standard approach was used to measure poverty, rather than the multiplier approach employed for poverty measurement by the official sectors in 1974 and 1978. In 1988, the Korea Institute for Health and Social Affairs (KIHASA) provided a poverty line using the budget standard approach, which was believed to be more persuasive to both the population and politicians than any other approach (Ahn *et al.*, 1989). In order to present a poverty line, the institute carried out a nationwide survey covering 5,000 representative sample households. The primary purpose of the survey was to collect income data and then distinguish those households with the lowest income level (30%). After separating households with the lowest income, the institute gathered 950 volunteer households that would agree to record their real expenditure. With analysis of the expenditure record, the institute identified standard items for the minimum cost of living and then added up the price

of all these standard items. The summation of the prices was suggested to the MOHW as a poverty line. The same institute provided the poverty lines in 1994, 1999 and 2004, using the same approach as that employed in 1988.

The 1999 and 2004 surveys contained a trial that is worth noting in relation to poverty measurement, not only measuring deprivation with reference to the work of Townsend (1979) and Mack and Lansley (1985) for the first time,[25] but also producing subjective poverty lines – although deprivation methods and the subjective poverty lines did not influence the setting of an official poverty line. This represents the first challenge to a normative poverty line produced through the budget standard approach, indicating that Korean society is sufficiently developed for poverty to be measured in terms of deprivation as well as income.

Many studies of poverty measurement were presented in the academic field during this period, such as those by Bae *et al.* (1987), Kwon (1991) and Ahn (1991) using the budget standard approach in 1987, 1988 and 1991, respectively; and by Lee (1989) and Park (1991), who generated a subjective poverty line in 1989.

2.2.3 Conclusion

Since its liberation from Japan in 1945, Korean society has developed to a great extent in terms of politics and the economy. The field of poverty measurement associated with politics and the economy is not exceptional. In times when most Korean people suffered poverty, it was not a pressing issue for the Korean government to measure who the poor were. However, as Korean society developed and the government began to recognise that social welfare is a key issue, it started using advanced methods to estimate poverty, from the multiplier approach to the budget standard approach. Since 1999 the official sector has estimated deprivation and provided subjective poverty lines, which implies that Korean society has begun to recognise that poverty needs to be measured by various methods, particularly in order to identify those in poverty.

Yet, despite this recognition, it seems that attention has remained focused on

[25] As can be seen in the work of Kim and Kim (1988), and Yu and Lee (1994), few academic studies measured deprivation before 1999. However, these studies are different from the measurement of deprivation in these surveys, in that the former aim to investigate deprivation *per se,* while the latter aim to measure deprivation to provide a Townsend-type poverty line.

the issue of how to establish an income poverty line. As a result, while the income poor have been discussed, there has been no discussion about the deprivation poor or the consistently poor.

2.3 Conclusion

This chapter reviewed the main methods for identifying the poor and then discussed how they have been applied to poverty measurement in Korea. The discussion of these methods has concluded that each method has its own advantages and disadvantages, and that therefore the choice of method is dependent on social conditions and the purpose of the research. However, this conclusion does not necessarily mean that the combined method of identifying the poor in terms of both income and deprivation is optional. Rather, in light of Ringen's argument (1988) that income is a quite different indicator from deprivation in relation to identifying the poor, it seems that the combined method needs to be discussed in order to identify the poor.

The review of poverty measurement in Korea showed that it has developed as Korean society has become democratic and its economy has grown. This political and economic situation demonstrates that the combined approach can be applied to poverty measurement in Korea. Furthermore, since the government began measuring deprivation in 1999, it is not unrealistic to suggest that the combined approach to poverty measurement could be introduced under the government's current system.

CHAPTER 3. IDENTIFYING THE POOR FOR THIS STUDY

Chapter 3 discusses how to identify the poor for this study. As discussed in Chapters 1 and 2, this study classifies the poor into three groups as follows:

1. *The income poor*, whose income falls below an income poverty line;
2. *The deprivation poor*, whose deprivation scores are above a deprivation poverty line;
3. *The consistently poor*,[26] whose income falls below an income poverty line and whose deprivation scores are above a deprivation poverty line.

In order to discuss the identification of these three groups, this chapter is organised as follows. Section 3.1 describes the data set used in this study. Section 3.2 presents how to define the income poor. Section 3.3 outlines the method used to identify the deprivation poor. Section 3.4 offers a solution for how to identify the consistently poor. Although previous studies in European countries, such as those by Muffels *et al.* (1992) and Halleröd (1995b), showed that the composition of the income poor is quite different from that of the deprivation poor – which meant that it was worthwhile classifying the poor into the three groups listed above – there was a need to examine whether or not their argument could be true of the Korean situation, because the deprivation poor and the consistently poor have never been discussed in Korea. A one-month pilot survey was carried out to examine this argument. This survey is discussed in Section 3.5. Section 3.6 presents a conclusion to this chapter.

3.1 Data set

This study uses the official MOHW data set for 2004. The data set was created by the KIHASA, which was commissioned by the MOHW to suggest a poverty line to the Ministry. According to the 'National Basic Livelihood Security Act' of Korea, the MOHW must announce an income poverty line every year a month before the year ends, which will be valid for the next year.[27] The Act also states that every fifth year, the income poverty line should be produced by conducting a nationwide

[26] This term is borrowed from the work of Nolan and Whelan (1996).
[27] Due to the amendment of the Act on 5 March 2004, from 2005 onwards the income poverty line should be announced by 1 September every year.

survey.[28] Because 2004 was the year that the Ministry had to announce a poverty line based on this huge survey, it commissioned the KIHASA to conduct the necessary survey and suggest a national income poverty line.

As discussed in Chapter 2, the KIHASA had favoured the budget standard approach to producing a national income poverty line since 1988. When this approach is used to present an income poverty line, the core work lies in how to construct the basket of goods identified as necessities. The KIHASA had traditionally conducted two surveys to do this. The first investigated household income, and the income data thus obtained were used to distinguish households with lower incomes (such as those with 30% or 40% of the mean income[29]) from other households. The second survey investigated actual expenditure by the lower-income households identified in the first survey. The expenditure data were obtained from records in housekeeping accounting books kept for a month by volunteers from the lower-income households. The KIHASA constructed a basket of goods by analysing these expenditure records, and then suggested the summation of the price of necessities as an income poverty line to the Ministry.[30] This tradition was not changed in the 2004 official surveys. However, one feature of the first of the 2004 surveys was that the number of sample households to be surveyed (30,000) exceeded that of any other survey conducted by the institute. Thus, it can be said that the data set collected from

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[28] Thus, in the remaining four years, poverty lines are produced by applying price increases to the previous poverty line, rather than through a nationwide survey.

[29] There is no particular rationale for selecting 30% or 40% as the threshold for separating lower income households from other households.

[30] The right finally to determine an income poverty line is reserved for the Central Committee for Securing Basic Living (CCSBL) established in the Ministry, which consist of 13 members: 5 from bureaucracies, 4 experts and 4 public representatives. This committee generally adjusted the poverty line suggested by the institute, taking account of the national budget, for example. However, despite this adjustment, the poverty line suggested by the KIHASA was almost the same as the final poverty line set by the committee. The 2005 poverty line was not exceptional. In 2004, the institute suggested three kinds of poverty lines according to location: 1,295,321 Korean won (GBP 648) for 4-member households in big cities; 1,183,748 Korean won (GBP 592) for the same size household in medium or small cities; 1,010,449 (GBP 505) Korean won for the same size household in rural areas. Comparing the three kinds of poverty lines suggested by the institute with the single official poverty line of 1,136,332 Korean won, which was set regardless of location, shows that the official poverty line was 158,989 (GBP 80) Korean won and 47,416 Korean won (GBP 24) less than the poverty lines suggested for large, medium or small cities respectively, and 125,883 Korean won (GBP 63) more than the poverty line suggested for rural areas. The weighted average of the three poverty lines that consider the population according to location was 1,217,891 (GBP 609) Korean won (Source: Document for 19th and 20th Conference for the 2005 official poverty line (MOHW, 2004b; 2004c). When the official poverty line is compared to the weighted average of the three suggested poverty lines, the difference amounts to just 81,559 Korean won (GBP 41). As a result, it can be said that the suggested poverty line is not significantly different from the official poverty line.

the survey is more representative of Korean households than any other data set. Table 3.1 below presents the outline of the two surveys carried out in 2004.

Table 3.1 2004 official surveys

First survey	⇒	Conducted on 30,000 representative households (19^{th} April – 7^{th} July 2004)
Second survey	⇒	2,000 households selected from households with the lowest income (40%) (1^{st} – 31^{st} August 2004)

This study uses the data set obtained from the first of these two surveys. The questionnaire for the first survey deals with a wide range of the data required for this study, such as general household matters, income, assets, debts and deprivation (see Appendix 1). It therefore seems to me that the data set obtained from the survey is the most appropriate to this study, which explores self-assessment by the poor.

The first survey was conducted between 19^{th} April and 7^{th} July 2004, by 200 investigators who individually visited 30,000 representative households. The samples were selected by stratified random sampling. Eventually, the data for 25,757 households were gathered and then weighted in terms of area and family size in order to secure a representative sample (Kim *et al.*, 2005). This was the data set used for this study.

There are three advantages to this data set. First, it represents Korean households. Second, it is identical to the data set on which the 2005 official poverty line was based. In particular, this second feature is expected to facilitate a direct comparison of the results of the analysis of this study and related data announced by the Korean government on the basis of the official poverty line. Third, this data set is the latest and largest of the data sets related to poverty in Korea.

However, there was a crucial problem with the data set to be obtained from the original survey questionnaire, in that it was not intended to measure self-assessment by the poor, which is indispensable to this study. This meant that unless the necessary information on self-assessment by the poor was included in the data set, it could not be used for this study. At my request, one of the 14 questions I devised in relation to measuring self-assessment was included in the survey questionnaire. As the one

question included in the questionnaire was the most important question for my study, this meant that the data set could be used for this study after all (see Section 4.1 for details).

3.2. Defining the income poor

3.2.1 Employment of the 2005 poverty line set by the Korean government

As discussed in Chapter 2, a great deal of effort has been made to identify the income poor, but despite these efforts no agreed method has yet been presented. Given this situation, the previous chapter argued that adoption of a particular method is a matter of choice, depending on the purpose of the study and social conditions.

Since the purpose of this study is to explore self-assessment by the poor in Korea, it would be better to identify the income poor using the dominant method in Korea rather than other methods. This is because adopting the dominant method in Korea will at least prevent debate about whether or not identification of the income poor by this study is convincing, enabling this study to focus on the investigation into self-assessment by the poor. As seen in Chapter 2, a review of the methods used in Korea shows that the prevailing method is the budget standard approach, particularly in the official sector. As the official 2005 poverty line announced by the Korean government on 1st December 2004 was the latest poverty line derived from the budget standard approach,[31] this study employs the poverty line in order to identify the income poor, rather than trying to generate another income poverty line using other methods such as the subjective poverty line and the relative poverty line.[32]

There seem to be three advantages to using the official poverty line in identifying the income poor for this study. First, the poor to be identified by the poverty line are those that experts judge to be poor, since the poverty line was provided by the budget standard approach, which is dependent on the decision of experts. In contrast to this, self-assessment by Korean households directly relates to

[31] Although the poverty line was announced in 2004, it is called the 2005 official poverty line in this study because the poverty line was valid in 2005 rather than in 2004.

[32] In Chapter 6, which deals with self-assessment by the income poor, income poverty lines obtained by other methods discussed in Chapter 2 will be provided to examine the adequacy of the official poverty line.

whether or not they see themselves as poor. Therefore, exploring self-assessment by the poor identified by the poverty line will allow us to compare the experts' judgement with that of the population.

Second, using the poverty line enables this study to investigate self-assessment by those who are identified as poor by the official poverty line. Thus, this study has a practical advantage in that self-assessment by the income poor can be related to assessment of the traditional poor by the government poverty line.

Third, as mentioned above, using the poverty line is helpful in comparing the results of the analysis of this study with government data based on the poverty line.

3.2.2 Issues related to the 2005 official poverty line

Although this study uses the 2005 official poverty line to identify the income poor, several issues are addressed at the outset in order to actually identify them using the data set. In my view, four issues need to be discussed in relation to identification of the income poor: first, the stages of income; second, the equivalence scale; third, the time period; fourth, the unit of analysis. We will begin with stages of income.

Stages of income

This first issue relates to the definition of income used in the official poverty line. There are various stages of income, depending on how it is defined. According to Nolan and Whelan (1996) and Saunders (2002), there are four income stages: primary, market, gross and disposable income. These four stages can be defined as follows: first, primary income includes income earned through employment and self-employment, as well as from property such as capital; second, adding private transfers to primary income generates market income; third, adding public transfers to market income gives gross income; fourth, deducting taxes and social insurance contributions from gross income yields disposable income.

Of these income stages, disposable income has been regarded as the most appropriate in relation to poverty measurement, because it best indicates purchasing power and standard of living (Nolan & Whelan, 1996; Saunders, 2002). As a result, disposable income has been widely used in poverty research (see Orshansky 1965; Goedhart *et al.*, 1977; Mack & Lansley, 1985; Nolan & Whelan, 1996).

However, since income in the 2005 official poverty line is related to gross income, which is generated by adding tax and social contributions to disposable income, using disposable income to identify the income poor for this study creates a problem in that the official poverty line is raised by the amount of tax and social contributions. As a result, when disposable income is used to identify the poor in this study, the number of poor will be greater than it should be in accordance with the official poverty line. For this reason, this study uses gross income to identify the income poor according to the definition of income used in the official poverty line.

Equivalence scale

The next issue to be discussed is equivalence scale. This was introduced to adjust income in order to account for different needs according to household size and composition. For example, it is evident that households with two adults will require more income than those with just one adult in order to achieve the same quality of life. However, owing to economies of scale, the income required for the former amounts to less than twice the income necessary for the latter. Thus, where the income scale for one adult is 1, the equivalence scale for an additional adult falls between 0 and 1. In addition to the size of the household, its composition is another factor in determining an equivalence scale. For example, children have lower economic needs than adults, meaning that where the income scale for one adult is 1, the equivalence scale for a child falls between 0 and 1.

Although various equivalence scales that take account of such different needs have been established (Buhmann *et al.*, 1988; Atkinson *et al.*, 1995), an equivalence scale with which everybody agrees has yet to be presented (Nolan & Whelan, 1996). The Korean government uses its own equivalence scale, which considers both household size and composition. First, the government assumed a for each household size as follows: 1 adult for a 1-member household; 2 adults for a 2-member household; 2 adults and 1 child for a 3-member household; 2 adults and 2 children for a 4-member household; 2 adults and 3 children for a 5-member household; and 2 adults and 4 children for a 6-member household. The limitation of the use of these representative households is that it does not fully consider a household's composition, but treats all households of a particular size as equal to each other.

Then, to establish the equivalence scale for the 2005 official poverty lines, within the budget, the government considered 'OECD equivalence scale', which gives "a value of 1 to the first household member, of 0.7 to each additional adult and of 0.5 to each child".[33] Because the government was concerned about the rapid increase in poverty lines, it set up the equivalence scale for 2005 at lower standards than that of the OECD scale, deciding that it would gradually increase the standards until 2009, when they would match the OECD scale (Kim *et al.*, 2005). Thus, the government established the equivalence scales from 2005 to 2009 as seen in Table 3.2 below.

Table 3.2 Korean government equivalence scales from 2005 to 2009 (announced in 2004)

Household size	1	2	3	4	5	6
2005	0.3533	0.5883	0.7990	1.0000	1.1466	1.3005
2006	0.3574	0.5988	0.8030	1.0000	1.1562	1.3178
2007	0.3616	0.6092	0.8070	1.0000	1.1658	1.3352
2008	0.3658	0.6196	0.8110	1.0000	1.1754	1.3526
2009[34]	0.370	0.630	0.815	1.0000	1.185	1.370

Despite the fact that the government equivalence scale does not fully reflect the composition of the household, it is used in this study because it allows us to directly compare Korean government data with the results of this study.

Time period

The third issue involved is the time period. Income fluctuates as time passes. In other words, income has a feature of *flow*, not *stock* (Kim *et al.*, 1991). This *flow* feature means that income has to be measured over periods such as a week, a month or a year, not at a particular point in time. Although income is estimated on the basis of certain periods, measuring income during a short period such as a day is less reliable because there are quite wide fluctuations in daily income. However, in relation to poverty measurement, it would not be appropriate to measure income by extending the time period to a much longer period, especially a lifetime. There are two reasons

[33] http://www.oecd.org/dataoecd/61/52/35411111.pdf

[34] The equivalence scale for 2009 is derived from 'the OECD scale' when a 4-member household is used as a standard household.

for this: first, it is almost impossible to estimate lifetime income (Atkinson *et al.*, 1995; Behrendt, 2002); second, those who are poor at present should be regarded as poor, even though they might become very well off in the future (Behrendt, 2002). Thus, in relation to poverty measurement, it would be appropriate to choose one period within a year such as a week, a month, a quarter or the whole year, as long as there is no compelling reason for any particular period.

In the case of Korea it is not considered appropriate to choose a week or a fortnight as a time period, since salaries are generally paid monthly. However, measuring monthly income is not appropriate either, since it does not reflect the frequent monthly fluctuations in income. Therefore, quarterly, half-yearly or yearly income should be selected. The 2004 official survey opted for yearly income. Behrendt (2002) supports the adoption of yearly-based income, saying:

> For analyses of poverty, a period of one year may thus be a reasonable approximation of household budgeting and planning periods. It constitutes an acceptable compromise between equalising short-term income fluctuations and accounting for the immediate effects of low income on groups of the population (p.79).

Given the advantages of adopting annual income, it seemed reasonable to employ this kind of income for this study. Therefore, this study uses one-year income measured in the official survey, although for the sake of convenience, yearly income is presented in the form of monthly income, which is calculated by dividing annual income by twelve.

Unit of analysis: individuals, families or households?

The last issue to be discussed is selection of the unit of analysis: individual, family or household. The narrowest unit would be the individual. Using the individual as the unit of analysis would be ideal, since "the ultimate source of concern is the welfare of the individual" (Atkinson *et al.*, 1995: 16). However, it is almost impossible to measure the income of all individuals. For example, as Atkinson *et al.* (1995) pointed out, it is very hard to measure children's income, especially transferred from their parents' income, because there is no way of measuring the intra-transfer income between them. As a result, selecting the individual as the unit of analysis results in unreliable measures of income.

This inability to estimate the intra-transfer income forces us to choose the family or the household as the unit of analysis. Selecting either of them as the unit of analysis is based on the assumption that income is equally shared among members of the family or household. Since the Korean government announces the national poverty line on the basis of the household, it would be better to select the household as the unit of analysis for this study rather than the family, as it enables us to compare the results of this study with those produced by the government.

3.2.3 Defining the income poor

On 1st December 2004, the Korean government announced the official 2005 poverty lines according to household size, as shown in Table 3.3. These poverty lines include one for a standard 4-member household, which is set up using the budget standard approach. The poverty lines for other household sizes are established by multiplying the equivalence scales in Table 3.2 by the poverty line of a 4-member household.

Table 3.3 2005 official poverty lines by household size for one month

Household Size	1	2	3	4	5	6
Korean Won	401,466	668,504	907,929	1,136,332	1,302,918	1,477,800
(GBP)	(201)	(334)	(454)	(568)	(651)	(739)

* When a household has more than 6 members, 174,882 Korean won (GBP 87) are added for each additional member

In order to define the income poor using poverty lines, this study uses the government equivalence scales to convert the income of each sample household in the data set into an equivalent income for a 4-member household. Each household's equivalent income is then compared to the poverty line for a 4-member household. A household is distinguished as income poor when its equivalent income falls below 1,136,332 Korean won (GBP 568). Analysis of the data set in order to confirm the income poor generated the information shown in Table 3.4 below, which reveals that 18.5% of all the households surveyed are income poor.

Table 3.4 Number of income poor

	Income poor households	Non-income poor households	Total
%	18.5	81.5	100
(Number of households in data set)	(4,734)	(20,828)	(25,562)*

* 195 of the 25,757 households sampled were excluded because they did not answer the question on income. As a result, this study uses the data set made up of 25,562 households.

3.3 Defining the deprivation poor

3.3.1 Using the number of income poor

As discussed in Chapter 2, several methods of defining the deprivation poor have been presented. In order to identify the deprivation poor, this study follows Halleröd's method (1995b), where the number of income poor is used to establish the number of deprivation poor. Thus, the proportion of deprivation poor is set at 18.5%, which is the percentage of income poor households derived from the Korean government poverty line (see Table 3.4 above). However, using the number of income poor to establish the number of deprivation poor does not mean that deprivation poor households will be the same as the income poor households, as households with identical income levels can experience quite different degrees of deprivation. As a result, it is expected that a number of households among the income poor will not belong to the deprivation poor, and vice versa (see Section 8.1 for details). This is why this study identifies the poor in terms of income and/or deprivation, although the number of deprivation poor is set at the number of income poor.

However, establishing the deprivation poor on the basis of the income poor has its drawbacks, in that identification of the deprivation poor does not directly rely on the degree of deprivation of the households concerned, but refers to an income poverty line. With regard to Halleröd's method (1995b), Nolan and Whelan (1996) point out that there is no reason why the proportion of income poor should be based on identification of the deprivation poor.

Nonetheless, there are three reasons why this study uses the proportion of income poor to establish the deprivation poor. First, a convincing method of identifying the deprivation poor has yet to be presented. As discussed in Chapter 2, each method has its own strengths and weaknesses. As a result, adopting a particular method of identifying the deprivation poor can be said to be a matter of choice that depends on the purpose of the study. Second, compared with other methods, such as Mack and Lansley (1985) and Nolan and Whelan (1996), where the establishment of a deprivation poverty line is somewhat dependent on the judgement of the

researchers, Halleröd's method (1995b) gives an objectively clear-cut deprivation poverty line, although it is rooted to the income poverty line. Third, and particularly in relation to this study, the weakness that a deprivation poverty line is based on an income poverty line can be turned into a strength. This is because when the number of deprivation poor is based on the number of income poor, it may mean that a deprivation poverty line is set up at a similar level to an income poverty line. This might enable us to make a safer comparison of the features of the income poor and the deprivation poor.

However, the fact that the deprivation poor will be set according to the number of income poor does not mean that it is not necessary to measure deprivation. While the number of deprivation poor is already fixed, it is still necessary to measure deprivation in order to identify the deprivation poor. This is because the number of deprivation poor *per se* cannot say who the deprivation poor are. The deprivation poor can only be distinguished when the degree of deprivation in every household is measured. When households are ranked according to their degree of deprivation, the deprivation poor can be identified at the same proportion of the overall poor as the income poor. As a result, it is indispensable to measure deprivation in order to identify who the deprivation poor are.

3.3.2 Measuring deprivation

3.3.2.1 How to measure deprivation?

In order to measure deprivation in households, this study generates deprivation scores for those households indicating a degree of deprivation. For the purposes of this study, measuring deprivation means generating deprivation scores.

With regard to the provision of deprivation scores, there are three issues to be discussed: firstly, how to set up deprivation items from which the scores are derived; secondly, how to control taste in order to measure deprivation due to inability and not preference; thirdly, how to add up the deprivation score generated whenever households are deprived of a deprivation item (Nolan & Whelan, 1996). As the first issue is closely related to the third, they will be addressed together, and the second issue discussed afterwards.

As deprivation scores are eventually generated from deprivation items, how to set up the items can be said to be a point of departure in measuring deprivation. Deprivation items have changed greatly since the work done by Townsend (1979), as can be seen in the work of Mack and Lansley (1985), Nolan and Whelan (1996), Gordon and Fantazis (1997a) and Gordon (2000). This is due to the fact that deprivation items are heavily dependent on the society concerned. For example, items in developed societies will tend to include hobby or leisure items, which are less associated with satisfying basic needs, while items in underdeveloped societies will focus more on items such as food, clothing and housing, which are closely related to meeting basic needs. However, since the social conditions do not automatically suggest what should be included as deprivation items, their selection will ultimately rely on the judgement of the researchers. When such reliance is inevitable, this raises the issue of how to examine their judgement. The dominant method for testing researchers' judgement is to get the population to determine what deprivation items are. There are two methods of doing this: the first uses the perception of the majority of the population as to whether or not they think of deprivation items as necessities (Mack & Lansley, 1985); the second uses the percentage of the public judging an item to be a necessity to measure deprivation scores (Halleröd, 1995b).

When the first method is used to set up deprivation items, only those that the majority of the population regard as necessities are included in the final list of deprivation items. Thus, the first method directly uses popular perception to select deprivation items. In contrast to this, the second method only employs public perception in relation to the calculation of deprivation scores, rather than in the selection of deprivation items. For example, where 45% of the population see a mobile phone as a necessity, the second method gives a score of, say, 0.45 to the mobile phone, while the first method excludes mobile phones from the deprivation items because 45% is less than majority of the population.

The differences between the two methods continue to play out in the allocation of a deprivation score for each deprivation item. The first method allocates a score of 1 to every necessity, while the second method weights each item according to the percentage of the public that sees it as a necessity. For example, assuming that 95%

of the population think of a refrigerator as a necessity, the first method gives a score of 1 when households are deprived of this item, whereas the second method gives a score of 0.95. Thus, the first method generates deprivation scores by adding a score of 1 whenever a household is deprived of an item, while the second method generates deprivation scores that reflect public perception of the need for each item.

It has been argued that the strength of the second method is that it reflects popular perception better than the first (Halleröd, 1998). For example, for certain items such as computers, perception may vary according to age: most young people might regard it as necessity, whilst a lot of old people might not. In this situation, if a minority of the population see computers as a necessity, the first method does not include them as a deprivation item, even though younger people see them as a necessity. This results in a loss of information about the perceptions of younger people. However, with the second method, information about the perception of the younger age group would be still considered as the deprivation scores are calculated according to the degree of popular perception.

This study therefore uses the second method to measure deprivation scores, as it better reflects popular opinion.[35] This method also has a crucial advantage in relation to this study, in that it can give far more detailed deprivation scores than the first method, making it possible to distinguish more articulately the correspondence between the deprivation poor and the income poor.

With regard to measuring deprivation scores, the remaining issue to be addressed is how to control taste. When deprivation scores are measured, it would be problematic if this includes deprivation originating from taste. For example, households that cannot afford a car should be dealt with differently from households that do not want a car even though they can afford one. Mack and Lansley (1985) present a good method for controlling taste, using questions with the choices 'don't have but don't want' and 'don't have and can't afford'. Use of these two choices is intended to separate deprivation due to enforced lack of resources from deprivation due to taste. Of the two, the choice 'don't have and can't afford' refers to deprivation due to enforced lack of resources. This method has been widely used to control taste (see e.g. Nolan & Whelan, 1996; Gordon & Pantazis, 1997a; Kim *et al.*, 1999;

[35] Although the second method has this advantage, Halleröd (1998) found that the deprivation scores generated by both methods are interchangeable.

Gordon, 2000; Kim *et al.*, 2005), and will be employed in this study to control taste in relation to generating deprivation scores.

Consequently, this study produces deprivation scores as follows: the first step is to set up deprivation items; the second step is to determine the percentage of the population that sees each deprivation item as a necessity; the third step is to investigate which items each household is deprived of due to enforced lack of resources; the fourth step is to add up the scores generated whenever a household is deprived of a deprivation item, considering the percentage of the population that sees this item as a necessity. In the next section, these steps are applied to the data set used in this study.

3.3.2.2 Measuring deprivation scores for this study

3.3.2.2.1 Setting up deprivation items

This study employs the deprivation items used in the 2004 official survey, which established 37 items as deprivation items.

Table 3.5 37 items used in the 2004 official survey

A. Durables	21 Taking oriental tonics or medicine to promote a nutritious diet and health
1 Refrigerator	**F. Children's education (only households with child/ren)**
2 Washing machine	22 Having children that have graduated from at least high school
3 Microwave	23 Having children taking extra activities
4 Mobile phone	24 Having children buying necessary books
5 VCR or DVD player	**G. Leisure and activities**
6 Personal computer	25 Holidays away from home once a year
7 Internet	26 Eating out at least twice a year with family
8 Car	27 Hobby or leisure activity
B. Diet	**H. Savings**
9 Meat or fish every week	28 Savings for a rainy day
10 Fresh fruit every week	29 Savings or individual pension for old age
C. Clothing	30 Private insurances on top of social insurance
11 At least two warm coats (all members)	**I. Social support**
12 At least one best outfit for special occasions (adults only)	31 Having relatives or friends who you can talk to and receive comfort from when in need
13 At least one pair of shoes (adults only)	32 Having relatives or friends from whom you can have information such as work
D. Housing and living environment	33 Having relatives or friends from whom you can have material aid
14 Heating using gas or paraffin, or central heating	**J. Work conditions**
15 Number of bedrooms appropriate to the needs of the household	34 Working over 50 hours a week
16 Allocation of an independent room according to gender to household members over 11 years old	35 Working standing for over three quarters of the total working hours
17 Access to public transport within 10-minute walk	36 Dangerous work conditions
E. Health	37 At high risk of losing job
18 Regular treatment of chronic illness in the case of members who have suffered from a chronic illness for over 3 months	
19 Dental treatment in a dental clinic	
20 Treatment in hospital when necessary	

As shown in Table 3.5 above, these include durables, diet, clothing, housing, health, children's education, leisure and activities, savings, social support and work conditions.

Firstly, for the purposes of this study, it would be reasonable to exclude items related to partial households because including them would cause a bias. For example, child-related items may show households with children as being more deprived than households without children because the former are more exposed to deprivation items, even though their degree of deprivation may be the same. This separation of items related to partial households from the remaining items can be also seen in the work of Mack and Lansley (1985), where items associated with households with children are separated from items related to whole households. Looking at all 37 deprivation items in the official survey, it seems that those applicable only to partial households consist of four items associated with children and one item associated with households where one or more member suffers from chronic illness. As shown in Table 3.6 below, these five items only appear to be applicable to 33% - 52% of all households. This confirms that their inclusion as deprivation items can lead to significant bias in measuring deprivation. For this reason, these five items are excluded from the list of deprivation items for this study.

Table 3.6 Percentage of households where the five items are applicable

	% classing item as a necessity	% of households applicable
Having children that have graduated from at least high school	94.2	52.2
Regular treatment of chronic illness in the case of members who have suffered from a chronic illness for over 3 months	91.5	42.9
Having children buying necessary books	90.2	42.4
Having children taking extra activities	73.4	42.3
Allocation of an independent room according to gender to household members over 11 years old	58.0	33.3

Secondly, it would be reasonable to exclude from the final list of deprivation items those items that are believed to have little to do with lack of resources, because this study only considers deprivation due to enforced lack of resources. In the case of items related to social support, covered by the questions 'having relatives or friends

who you can talk to and receive comfort from when in need', or 'from whom you can have information such as work', or 'from whom you can have material aid', it is likely to be hard to see how the lack of relatives or friends is due to lack of resources.[36] Such relatives and friends cannot be acquired by spending money. The items covering work conditions, covered by questions such as 'working over 50 hours a week' and 'working standing over three quarters of the total working hours' also have little to do with lack of resources. For this reason, the seven items in Table 3.7 viewed as being less related to lack of resources are excluded from this study.

Table 3.7 Perception of the 7 items as necessities

	% classing item as necessity	% of households applicable
Social support		
Having relatives or friends who you can talk to and receive comfort from when in need	81.9	100.0
Having relatives or friends from whom you can have information such as work	67.5	99.1
Having relatives or friends from whom you can have material aid	60.3	99.6
Work conditions		
At high risk of losing job*	84.8	75.7
Dangerous work conditions*	84.3	75.8
Working over 50 hours a week*	58.4	76.0
Working standing over three quarters of the total working hours*	55.4	75.9

*The percentages of these 4 items are derived from selecting 'it should not' from the responses 'it should not' and 'it may'.

The removal of 12 items from the original list of 37 deprivation items leaves a total of 25 deprivation items selected for this study. Table 3.8 below presents the opinions of Korean people as to whether or not these 25 items are regarded as necessities, as well as the percentage of households to which they are applicable. In Table 3.8, these items are ranked from the highest to the lowest percentage in terms of being recognised as a necessity. This table shows that 24 items are regarded as a necessity by the majority of the population, while one item, a VCR or DVD player, is regarded as a necessity by 47% of the population. Although only 47% see this item as a necessity, it is included in the deprivation items here because this study follows

[36] As can be seen in the work of Burchardt *et al.* (2002), it is likely to be more appropriate that these items are used as indictors to refer to 'social interaction', which is one of dimensions for measuring social exclusion, rather than for measuring deprivation for poverty.

the method of calculating deprivation scores according to the percentage of people who see an item as a necessity.

Table 3.8 Perceptions of 25 items as necessities

		% classing item as a necessity	% of households applicable
1	Refrigerator	99.0	N/A
2	Dental treatment in a dental clinic	97.2	99.7
3	Heating using gas or paraffin, or central heating	97.0	99.8
4	Treatment in hospital when necessary	96.1	99.8
5	Washing machine	95.9	N/A
6	Number of bedrooms appropriate to the needs of the household	93.6	99.9
7	Access to public transport within 10-minute walk	91.0	99.8
8	At least one pair of shoes (adults only)	90.1	100
9	At least two warm coats (all members)	89.5	100
10	At least one best outfit for special occasions (adults only)	89.0	100
11	Savings for a rainy day	87.7	100
12	Fresh fruit every week	82.8	100
13	Meat or fish every week	82.6	100
14	Private insurances on top of social insurance	82.4	99.7
15	Savings or individual pension for old age	81.3	99.2
16	Mobile phone	80.5	N/A
17	Personal computer	66.2	N/A
18	Eating out at least twice a year with family	65.2	99.9
19	Internet	64.6	N/A
20	Car	63.7	N/A
21	Microwave	60.5	N/A
22	Holidays away from home once a year	58.6	99.9
23	Taking oriental tonics or medicine to promote a nutritious diet and health	57.8	99.7
24	Hobby or leisure activity	51.2	99.8
25	VCR or DVD player	47.0	N/A

NB. Eight items have 'N/A' in the column '% of households applicable' because the official survey does not have a choice 'not applicable' for the 8 items in the 'Durables' category.

3.3.2.2.2 Controlling taste

The next issue to be addressed in measuring deprivation scores for this study is how to control taste. This study follows the method used by Mack and Lansley (1985), in which households are only regarded as being deprived of an item if they answer 'don't have and can't afford' to a question about a particular item, rather than 'don't have but don't want'. In Table 3.9 below the percentage of households saying they

'don't have and can't afford' as well as those classifying deprivation items as a necessity are arranged in order from the smallest to the greatest percentage deprived.

Table 3.9 Percentage of households deprived of listed items

		% classing item as necessity	% don't have/can't afford
1	Refrigerator	99.0	0.4
3	Heating using gas or paraffin, or central heating	97.0	2.2
6	Number of bedrooms appropriate to the needs of the household	93.6	2.8
7	Access to public transport within 10-minute walk	91.0	3.7
5	Washing machine	95.9	4.3
4	Treatment in hospital when necessary	96.1	5
16	Mobile phone	80.5	5.2
8	At least one pair of shoes (adults only)	90.1	8.2
17	Personal computer	66.2	9.9
2	Dental treatment in a dental clinic	97.2	10.2
9	At least two warm coats (all members)	89.5	10.9
21	Microwave	60.5	11.4
10	At least one best outfit for special occasions (adults only)	89.0	11.6
25	VCR or DVD player	47.0	11.7
19	Internet	64.6	11.9
20	Car	63.7	16.2
13	Meat or fish every week	82.6	17.2
12	Fresh fruit every week	82.8	19.9
18	Eating out at least twice a year with family	65.2	23.2
14	Private insurances on top of social insurance	82.4	28.2
15	Savings or individual pension for old age	81.3	31.8
23	Taking oriental tonics or medicine to promote a nutritious diet and health	57.8	36.9
22	Holidays away from home once a year	58.6	43.4
11	Savings for a rainy day	87.7	48.2
24	Hobby or leisure activity	51.2	50.6

3.3.2.2.3 Deprivation scores

Deprivation scores can be now calculated by fixing the deprivation items, determining popular perception as to whether each item is regarded as a necessity and finally, controlling for taste. The scores are calculated by adding the value reflecting the degree to which items are seen as necessities each time a household is unwillingly deprived of an item. As this study gives each deprivation item a score that reflects popular opinion (for example a score of 0.99 for refrigerator, which 99% of the population see as a necessity, as shown in Table 3.8), theoretically, the scores

have a range of 0 for households deprived of nothing to 19.705 for households deprived of all 25 items.

3.3.3 Defining the deprivation poor

Having obtained a deprivation score for every household, we can then rank the households according to their score. As this study establishes the number of deprivation poor at 18.5% (see Section 3.3.1), which is the proportion of the income poor, the next step is to find the deprivation score, which sets the deprivation poor at 18.5%. After analysis of the data set, a score of 5.708 was selected as a critical deprivation score by which the deprivation poor are identified at 18.5%. That is, households scoring 5.708 or above are identified as the deprivation poor for this study.

Table 3.10 Number of deprivation poor

	The deprivation poor	The non-deprivation poor	Total
%	18.5	81.5	100
(Number of households in data set)	(4,732)	(20,830)	(25,562)*

* 195 of the 25,757sample households did not answer the question on income, and were therefore excluded when identifying the deprivation poor.

3.4 Defining the consistently poor

This study defines the consistently poor as those whose income falls below an income poverty line and whose deprivation scores are above a deprivation poverty line. Table 3.11 below shows a comparison of the income poor identified by the official poverty line and the deprivation poor identified by the deprivation poverty line. This shows that the consistently poor who belong to both the income poor and the deprivation poor amount to 9.5% of the total sample households.

Table 3.11 Number of consistently poor

	The deprivation poor	The non-deprivation poor	Total
The income poor	**9.5%**	9.0%	18.5%
(Number of households in data set)	**(2,438)**	(2,296)	(4,734)
The non-income poor	9.0%	72.5%	81.5%
(Number of households in data set)	(2,294)	(18,534)	(20,828)
Total	18.5%	81.5%	100%
(Number of households in data set)	(4,732)	(20,830)	(25,562)

3.5 A pilot survey: identification of the poor

Although Muffels *et al.* (1992) and Halleröd (1995b) empirically confirm that there is a need to classify the poor into the income poor, the deprivation poor and the consistently poor, this study needed to examine whether classifying the poor into these three groups would be applicable in Korea. The reason for this is that if the difference between the income poor and the deprivation poor is so slight that it can be disregarded in the Korean situation, it would be meaningless to classify the poor into these three groups in order to explore their self-assessment. Therefore, this study carried out a pilot survey from 1st to 31st October 2003. This showed the possibility that the income poor would not be well matched with the deprivation poor, and that it would be worthwhile to classify the poor into these three groups in Korea.

3.5.1 Creating a questionnaire

A questionnaire for the pilot survey was created to obtain a wide range of answers regarding income and deprivation (see Appendix 2). This questionnaire was established with reference to previous studies, such as Mack and Lansley (1985), Nolan and Whelan (1996), Kim *et al.* (1999) and Gordon (2000).

3.5.2 Data collection

The pilot survey was conducted in Puyeo, a typical small agricultural town located in south-western Korea. At the time of the survey its population and households respectively numbered 88,725 and 31,401. Puyeo was chosen for the pilot survey due to the availability of samples. Sixteen social workers working in the department of social welfare in 16 sub-county offices in the town carried out the survey. They visited the households and interviewed one household member using the questionnaire I had designed. The households for this survey were selected at the interviewers' convenience, so it could not be said to be representative of the population of Puyeo. Out of the 160 sample households covered by the pilot survey, 124 sets of answers were collected, and 11 of these 124 households were excluded due to the lack of relevant data (3 households in terms of income, and 8 households in terms of deprivation). As a result, 113 households were used for analysis of the

pilot survey.

3.5.3 Defining the poor in the pilot survey

3.5.3.1 Identifying the income poor

The income poor in the pilot survey were defined using the 2003 official poverty line and equivalence scales for this poverty line, as seen in Table 3.12 below, which was valid when the pilot survey was done. Households are identified as income poor when their equivalent monthly income is below the poverty line for a 4-member household. A comparison of poverty lines and household income reveals that 84 out of 113 households, or 74.3% of households, appear to be income poor. The reason why the percentage of income poor is so high is that the sample for the pilot survey was chosen at the convenience of the investigators, who could gain easy access to poor households because they were social workers.

Table 3.12 2003 official poverty lines according to household size

Household Size	1	2	3	4	5	6
Korean Won (GBP)	355,774 (178)	589,219 (295)	810,431 (405)	1,019,411 (510)	1,159,070 (580)	1,307,904 (654)
Equivalence scale	0.3490	0.5780	0.7950	1	1.1370	1.2830

3.5.3.2 Identifying the deprivation poor

In the pilot survey the deprivation poor were defined using the method explained in Section 3.3, where the number of deprivation poor is established by the number of income poor. This means that the deprivation poor will amount to 84 out of 113 households, since this is the number of income poor. In order to identify 84 households as poor in terms of deprivation, deprivation scores were used to measure the deprivation of all sample households. As this study separates items that are applicable to the entire household from items applicable to partial households with children, deprivation items in the pilot survey questionnaire were constructed in two categories from the outset: one includes 40 deprivation items for the whole sample, while the other consists of 15 items for sample households with children. However, among the 40 items for the whole sample, three items: 'At least high school education for children', 'Visit to school of children, for example, sports day, parents

evening' and 'Extra activities after school for children' were not used as deprivation items for the pilot survey, as they could still be applied to partial households with children and would therefore have introduced a bias in measuring deprivation, as discussed in Section 3.3.2.2.1. Thus, 37 of the 40 items were used to measure the deprivation of households in the pilot survey.

Table 3.13 40 deprivation items for the pilot survey

	% classing item as necessity
Refrigerator	99.1
Treatment in hospital when necessary	98.2
Purchasing necessary medicine	97.3
Home with heating facilities	96.5
Telephone	96.5
Damp-free home	95.6
Electric fan	93.8
Three meals a day	92.0
Warm coat	92.0
Television	90.3
Washing machine	86.7
At least high school education for children*	82.7
Indoor toilet	82.3
Replacing or repairing broken electrical goods such as refrigerator or washing machine	82.1
Attending weddings and funerals	82.1
Number of bedrooms appropriate to the needs of the household	79.0
Home with water facilities and sewerage system	77.0
A small amount of money to spend each week on yourself, not on your family	76.4
Meat or fish every week	73.5
Visit to home town or relatives on New Year's Day or Chusuk	69.9
Fresh fruit and vegetables every week	68.1
Two pairs of shoes	67.3
Visit to school of children, for example, sports day, parents evening*	66.4
Visiting friends or family in hospital	65.5
Outfit for social or family occasions such as parties and weddings	59.3
Extra activities after school for children*	49.5
Presents on special occasions such as New Year's Day or Chusuk	47.3
Computer	46.0
Replacing worn-out furniture	45.5
Eating out twice a year with family	43.4
Holiday once a year with family	41.6
Presents for friends or family once a year	38.4
Internet	38.1
Hobby or leisure activity	36.9
Car	36.3
Mobile phone	30.4
VCR	29.2
Microwave	28.6
Having a daily newspaper	18.9
CD Player	8.9

NB. * Items removed from deprivation items for the pilot survey

These 37 items were used to calculate deprivation scores, following the method discussed in Section 3.3.2.2, where taste is controlled and a deprivation score given according to the degree of perceived necessity. A critical score identifying 84 households as deprivation poor was assessed as a deprivation score of 3.21. Thus, a household is defined as deprivation poor when its deprivation score is 3.21 or more.

3.5.3.3 Identifying the consistently poor

The consistently poor are those households identified as simultaneously income poor and deprivation poor. They can therefore be identified when the income poor are compared to the deprivation poor. In comparing the income poor and the deprivation poor, Table 3.14 below identifies 70 households as consistently poor.

This number of consistently poor households shows that there is an 83% overlap between the income poor and the deprivation poor (70 of the 84 households). It means that only 17% of the income poor do not match the deprivation poor, or vice versa. This percentage shows that the composition of the income poor is not very different from that of the deprivation poor. The finding that the composition of poor households is not largely dependent on the indicators used is due to the fact that the pilot survey was done on poor households, as inferred from the number of income or deprivation poor in the samples (74.3%). Thus, when the income poor and the deprivation poor are identified using the official data set, there is a strong possibility that they will be less closely matched than in the pilot survey. It shows that an independent discussion of the income poor, the deprivation poor and the consistently poor will be worthwhile when the official data set is used (see Table 3.11 above).

Table 3.14 The poor in the pilot survey

	The deprivation poor	The non-deprivation poor	Total
The income poor (Number of households in data set)	61.9% (70) (The consistently poor)	12.4% (14)	74.3% (84)
The non-income poor (Number of households in data set)	12.4% (14)	13.3% (15)	25.7% (29)
Total (Number of households in data set)	74.3% (84)	25.7% (29)	100% (113)

3.6 Conclusion

This chapter has discussed the means of defining the poor used in this study. With income and deprivation, it classifies the poor into three groups: the income poor, the deprivation poor and the consistently poor. The income poor are defined by employing the 2005 official poverty line, and the deprivation poor are identified by reference to the number of income poor. Unlike the two kinds of poor defined by the use of either income or deprivation, the consistently poor are identified through a combination of income and deprivation.

The reason for classifying the poor into three groups is based on the argument that the poor are defined very differently according to the use of either income or deprivation, or a combination of both these factors. When the poor are differently identified according to indicators, it would be unsatisfactory to examine self-assessment by only one group (such as the income poor) in exploring self-assessment by the poor. Therefore, this study classifies the poor into three groups in order to comprehensively explore self-assessment by the poor. The pilot survey showed that this classification, which has been discussed in the European context, would be valid in the Korean context.

CHAPTER 4. MEASURING SELF-ASSESSMENT AND ESTABLISHING VARIABLES

Chapter 4 deals with how to measure self-assessment of their situation by Korean households, and then addresses how to establish the variables that are believed to have an impact on self-assessment. As Korean households include poor households, the investigation into self-assessment by Korean households covers self-assessment by the poor. This chapter is significant in that, along with Chapter 3, which addressed how to define the poor, it deals with the remaining issues involved in exploring the purpose of this study. Further, this chapter is particularly meaningful to poverty research in Korea in that it addresses how to measure self-assessment by the poor for the first time.

Since Korean officials primarily look at poverty in terms of income, the only reason that self-assessment by the poor was measured in the 2004 official survey was because of my request for it to be done. As self-assessment by the poor shows what poverty looks like from the viewpoint of the poor themselves, rather than that of government officials or experts, measurement of their self-assessment is expected to reveal different aspects of poverty from those considered when it is identified primarily in terms of income.

Chapter 4 is organised as three sections. Section 4.1 addresses how to measure self-assessment by Korean households. Section 4.2 discusses how to set up variables which are thought to have an effect on self-assessment. Section 4.3 summarises the discussions of this chapter.

4.1 Measuring self-assessment

As explained in Section 3.1, this study uses the 2004 official data set. The advantage of this is that it allows me to use the latest and biggest – and thus most appropriate – data set on the living conditions of Korean households. In addition, since the data set is traditionally released to the public when the official report based on it is published (the report was published in May 2005), there is no ethical problem with using the data set for this study as long as the study is completed after publication of the report,

even though I began to analyse the data set after obtaining it in December 2004.[37]

However, despite the significant advantages of using the data set for this study, it also posed a critical problem in that the data set obtained from the original survey questionnaire was not intended to include information on measuring self-assessment by Korean households (including poor households), which was essential to this study. The Korean government and Korean researchers focused on the identification of the poor, and were not interested in self-assessment by the poor, so it was natural that the data set would not include information about self-assessment by the poor. As the data set would only be meaningful for this study if it covered self-assessment by the poor, for my purposes it was vital that it contained information about self-assessment by the poor. In this situation, I thought that it would be best if I devised several questions that were to be used to measure self-assessment, and if these questions were inserted into the original 2004 survey questionnaire. This meant that I had to contact the person in charge of the official survey and persuade him to include my questions on respondents' self-assessment of their situation in the original official survey questionnaire. Fortunately I received a positive response.

As a result, I needed to create specific questions dealing with self-assessment. Broadly speaking, previous studies showed that there were two kinds of question regarding self-assessment. The first kind measures self-assessment on a large scale, such as a 10-point scale. A good example of this is the question designed by Muffels *et al.* (1992), in which they used a 10-point scale (see Section 2.1.2). The advantage here is that self-assessment can be measured in more detail. However, the drawback is that it may be hard to determine which of the 10 points is critical in distinguishing the perception of being poor from that of not being poor. The second kind of question overcomes this weakness by measuring whether or not respondents think of themselves as poor. For example, Ferge (2000) offers three choices: absolutely poor, occasionally poor and not at all poor. The strength of the second kind of question is that the respondents' idea of their poverty status can be measured, although not in detail. In this regard, these two kinds of question are complementary to each other in measuring self-assessment.

[37] I was able to obtain it this early owing to my position as a civil servant in the MOHW.

On the basis of this review, for my thesis, I created 14 questions dealing with self-assessment by the poor: 6 questions to measure self-assessment in terms of overall aspects, income and deprivation (2 questions for each); 7 questions addressing people's ideas about their situation in the past and the future; and 1 question determining their opinion about the level of government support for the poor (see Appendix 3 for these 14 questions). However, when I met the person in charge of the survey in Korea when I went to the country to discuss my questions, he explained that there was little room in the original survey questionnaire since the questionnaire already constituted a heavy burden to the investigators for the survey. Therefore, we agreed that 2 of the 14 questions, which dealt with self-assessment in terms of overall aspects, would be included in the original survey questionnaire, as I believed that these were the key questions for my thesis. The two questions are shown below.

Q1. Please tick an appropriate score that indicates your household's economic situation.

Very poor									Very well off
1	2	3	4	5	6	7	8	9	10

Q2. How would you describe your household?

(1) Poor (2) Somewhere in between (3) Well off

Q1, which was made with reference to the question set up by Muffels *et al.* (1992), was designed to estimate self-assessment in detail, while Q2 was created to explicitly distinguish those who think they are poor from those who do not. These two questions were designed in order to obtain detailed self-assessment by the poor on the one hand, and on the other, to facilitate clear measurement of their ideas about whether or not they see themselves as poor.

After establishing the two questions, I sent them to the person in charge of the national survey and confirmed that they would be inserted into the survey questionnaire. However, while the questionnaire for the official survey was being produced, I was informed that only Q1 had been inserted into the questionnaire.[38] In

[38] This happened because the person in charge of the national survey did not have complete control over the creation of the survey questionnaire. Although he drafted a questionnaire, the final version of the survey questionnaire eventually relied on the judgement of members of a sub-committee

this study, the removal of Q2 meant losing its function, which was to clearly separate those who see themselves as poor from those who do not. The loss of this function made it very hard to obtain information on those who think of themselves as poor.

Given the context, Q1 had to undertake the function of Q2. The KIHASA's instructions (KIHASA, 2004a) for investigators shown below revealed the urgent need for additional instructions that Q1 was to take over the role of Q2.

> Ask interviewees which scores they think their households belong to. As there is no medium score in the scales, when they answer their households are in the middle, ask them once more whether their households are just below or just above the middle, and then record 5 or 6 according to their answers (p. 42).

According to these instructions, investigators were expected to ask respondents to rate themselves on a scale, instead of first asking whether or not respondents think they are poor. It was only if respondents answered that their households were in the middle that investigators were forced to ask once more whether or not they placed themselves just above or below the middle, in order to record a score of either 5 or 6.

This meant that when respondents gave a certain score as their first answer, the score would be recorded without examining their original response as to whether they thought of themselves as being in poverty. It was not going to be easy for Q1 to take on the role of Q2, which was designed to distinguish households that see themselves as poor from those that do not.

In order to correct this problem, I asked the person in charge of the survey to give an additional instruction to the investigators, requesting them to ask respondents to first answer whether or not they think they are poor and then record a score according to answers. The additional instruction (KIHASA, 2004b) shown below was given one week after the survey started.

> Record scores of 1 to 4 when interviewees answer their household are poor, record scores of 5 to 6 when they answer their households are neither poor

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established for the national survey. Q2 was deleted from the final version of the questionnaire because one member was insistent that Q1 could cover Q2, since Q1 was more comprehensive than Q2. This was because this person did not fully understand the role of Q2 in distinguishing households that assessed themselves as poor from households that did not. With Q2 removed from the survey questionnaire, Q1 should have been revised to take over the role of Q2, with explicit wording on each of the 10 scores that could separate poor positions from non-poor positions, rather than explicit wording only on the scores of 1 and 10. In this regard, the removal of Q2 without any adjustment to Q1 meant that this study has to interpret the remaining scores of 2 to 9, which have no explanatory wording.

nor well-off, and record scores of 7 to 10 when they answer their households are well off.

(1) In the case of poor households, the scores mean that the nearer to a score of 1 the poorer they are

(2) In the case of neither poor nor well off, the scores mean that a score of 5 means they are nearer to being poor, while a score of 6 means they are nearer to being well off

(3) In the case of well off households, the scores mean that the nearer to a score of 10 the more well off they are (p. 4).

Although the additional instruction was given to investigators, there was still a problem: because it was given one week after the survey began, it was doubtful that it would be accurately delivered to the investigators. As a result, I needed to examine how well the intention of the second instruction was applied in the actual interviews. To do this, I interviewed two of the investigators who took part in the 2004 official survey. One of them said:[39]

> I asked (the respondents) the question in this way. When we express a number 1 as very poor and when we express a number 10 as very well off, out of number 1 to 10, where the economic situation of your household belongs to? (After I asked the question in this way), when the respondents answered 1, 2, 3, or 4, I recorded according to their answers, and when they answered 5 or 6, I asked an additional question. --- Generally when the respondents answer, in the case of a number of 1 to 3, they just think that as a number 1 means very poor, the next (poor condition) is a number 2, and the next (poor condition) is a number 3. And in the case of middle position, they choose easily a number 5 or 6. Anyway, when we asked the question, we did not tried to explain that a number of 1 to 4 means poverty or something like that. It is because as very poor position means a number 1, it is a common sense that a number 2, which is made by one plus one, therefore, is slightly better than a number 1, and the slightly better position than a number 2 is 3. As interviewer and interviewees shared this concept, I did not feel a necessity (to explain to them) that a number of 1 to 4 means poverty and a number of 7 to 10 mean well off. --- The concept that a number 2 is better than a number 1, and that a number 3 is even better than 1 is shared by interviewer and interviewee. A number 4 would be the same case.[40]

Her statement implies that investigators carried out the interviews according to the first instruction, rather than the additional instruction. That is, since the investigators first asked respondents to pick an appropriate score out of 10 for their own situation, rather than asking them to say whether or not they are poor, we can infer that respondents might give a score of 4, for example, although they did not

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[39] Interview recorded on 28th December 2004.

[40] Interview with Kim, Mi-Nyeo.

think of themselves as poor. So it was felt that there was a real possibility that respondents might have interpreted the meaning of the scores differently from their intended meaning: that scores of 1 to 4 mean poor positions, scores of 5 to 6 mean middle positions and scores of 7 to 10 mean well-off positions. This meant that respondents' answers had to be interpreted with caution.

As this study is interested in **who** sees themselves as poor as well as **how** people assess their own situation on a large scale, regarding the interpretation in particular, it is important to discuss how to choose a critical score out of 10 which separates self-assessment of being poor from that of not being poor. Taking into account the 10-point scale in Q1, the two instructions given to investigators and the interview with the investigator participating in the official survey, it is likely that scores of 1 to 3 will indicate poor positions. In addition, it seems that there is no problem with interpreting a score of 5 as indicating a middle position. Thus, in terms of which of the 10 scores indicate a poor position, interpretation of the meaning of a score of 4 becomes critical.

According to the instructions, it is proper to see the score of 4 as indicating a poor position. However, in a situation where the meaning of the score of 4 was not conveyed to respondents, it seems that it is not appropriate to interpret the score of 4 as a poor position. In my view, when imagining that interviewees are asked to rate themselves on a 10-point scale without any instruction, it seems hard to see households answering a score of 4 as poor. This is because respondents might mistake the score of 5 as the medium score for 5.5, the true medium score, and so they might think that scores of 4, 5 and 6 refer to the middle position. This implies that it might be more appropriate to see the score of 4 as a low-middle position rather than a poor position. However, since this inference is not crucial in seeing a score of 4 as pointing to a low-middle position, it requires additional evidence.

Given this situation, it is very useful to look at the related results of other surveys, which can provide some information on interpreting the meaning of the score of 4. In 1999 and 2003, the Korean National Statistics Office (KNSO) presented statistical results on Korean people's self-perception regarding their social class (lower, middle or upper class). As seen in Table 4.1 below, 44.0% of respondents appeared to perceive themselves as lower class in 1999, and 42.5% in

2003; while 55.0 % of respondents appeared to perceive themselves as middle class in 1999, and 56.1% in 2003.

Table 4.1 Households by their perceived class in 1999 and 2003

Year	Lower Class	Middle Class	Upper Class
1999 (%)	44.0	55.0	1.1
2003 (%)	42.5	56.1	1.4

Source: www.nso.go.kr

Although self-assessment by Korean households as to their class is not regarded as the same as self-assessment of their own situation, there are similarities in that both address self-perception of their position in society. Thus, the number of households belonging to the lower class may be employed as a yardstick in relation to interpreting the score of 4.

Table 4.2 below shows the results of self-assessment of their situation by Korean households derived from analysis of the data set used by this study.[41] In this table, it is seen that 40.7% of households gave themselves scores of 1 to 3, while 55.6% of households gave themselves scores of 4 to 6. Comparing these scores with the results shown in Table 4.1 above reveals that they are surprisingly similar to each other. That is, almost same number of households gave themselves scores of 1 to 3 as the number of households that saw themselves as lower class, and almost same number of households gave themselves scores of 4 to 6 as the number of households that saw themselves as middle class. This strongly implies that a score of 4 in Q1 is associated with the middle position. Therefore, it seems reasonable to interpret a score of 4 as indicating a low-middle position rather than a poor position.

Table 4.2 Number of households according to each score

Self-assessment	1	2	3	4	5	6	7	8	9	10
% (Number.)	9.4 (2,400)	12.5 (3,199)	18.8 (4,810)	17.3 (4,421)	25.1 (6,405)	13.2 (3,379)	2.7 (700)	0.8 (198)	0.1 (29)	0.1 (21)
%	40.7			55.6			3.7			

[41] A detailed investigation into self-assessment of their situation by Korean households is made in Chapter 5.

Regarding which scores refer to a well off position, it would not matter which score of 6, 7 or 8 is interpreted as the critical score referring to a well off position, because this would not affect the investigation into who sees themselves as poor. However, if the critical score for the well off position were to be interpreted, in my view it would be reasonable to interpret a score of 7 as the critical score. Given that when scores of 4 to 6 are interpreted as indicating a middle position, it seems more reasonable to interpret a score of 7 as referring to a well off position rather than a middle position. As a result, the scores in Q1 can be interpreted as follows: scores of 1 to 3 refer to a poor position; scores of 4 to 6 refer to a position that is neither poor nor well off; scores of 7 to 10 refer to a well off position. While scores of 1 to 3 indicate a poor position, each has a different meaning. In light of the fact that a score of 1 was explicitly given the meaning of 'very poor' when Q1 was asked, a score of 2 can be interpreted as meaning 'fairly poor', while a score of 3 means 'slightly poor'. On the basis of the interpretation made so far regarding the meanings of the ten scores, the meaning of each score is presented in Table 4.3 below as a possible verbal label. Thus, it means that the descriptors for scores of 2 to 9 in Table 4.3 below were inserted post-hoc by myself and were not empirically validated.

Table 4.3 Interpretation of each self-assessment score

Self-assessment	1	2	3	4	5	6	7	8	9	10
Interpretation	Very poor	Fairly poor	Slightly poor	Low-middle position	Middle position	Upper-middle position	Well off	Slightly more well off	Fairly well off	Very well off

It could be argued that these interpretations are somewhat arbitrary. However, considering that almost the same number of households gave a self-assessment of 1 to 3 as those judging themselves to be lower class rather than middle class, it seems quite reasonable to see a score of 1 to 3 as indicating poor positions.

So far we have discussed how to measure self-assessment by Korean households, which includes self-assessment by the poor. The next section will discuss how to establish variables that are believed to have an influential impact on self-assessment as a basis for an exploration of what has an impact on self-assessment.

4.2 Establishing the variables that impact on self-assessment

4.2.1 Establishing explanatory variables

This section examines which variables have an impact on people's self-assessment. Since it deals with variables related to people's views about their own situation, it is of especial significance in the political realm, where people's opinion is considered to be significant. Ferge (2000) states that:

> feelings of subjective deprivation may be politically more important than objective poverty. It is the awareness of one's undesirable situation that, for instance, may push people to political extremes or may motivate political action in one way or another (p. 286).

This investigation into variables will also be of importance to policies on poverty, since it can contribute to setting up more effective policies in order to improve self-assessment, as well as giving an opportunity to examine current poverty policies based on poverty measurement using objective indicators.

Regarding the investigation into what influences self-assessment, we first need to examine how to identify and set up appropriate variables, since this is the fundamental foundation of the exercise. This study explores a number of variables in order to examine whether or how much these variables impact on self-assessment. In order to do this, variables are established by considering three aspects.

The first concerns the availability of the data to be used to establish the variables. As described in Chapter 3, this study employs the 2004 official data set, which means that the variables that are believed to impact on self-assessment are dependent on the data set. Although the data set contains a lot of information related to poverty, it does not include all the information necessary to establish certain variables. As a result, some variables that are believed to have a significant impact on self-assessment unfortunately cannot be included in the list of variables for this study. For instance, Ferge (2000) argues that the dynamics of change in living conditions is a significant element that has an impact on the subjective perception of poverty. Despite the significance of this variable, however, it cannot be dealt with in this study since the data set does not contain it. Other examples would be religion, social relations, political perception, etc. In this regard, the set of variables in this study,

which is based on the official data set, has some limitations due to some significant elements being omitted. Nonetheless, I believe that it is still worth using the official data set for this study since it is the most comprehensive and recent data set available in Korea in relation to poverty.

Secondly, the set of variables for this study is established by reference to previous studies. Ferge (2000) constructs four categories that impact on feelings of subjective poverty: first, demographic and sociological factors; second, static living conditions; third, dynamic living conditions; fourth, political perceptions. Due to the availability of data discussed above, this study focuses on the first and the second of these four categories. In the work of Ferge (2000), the first category includes variables of gender, especially in cases of single parenthood, social origin, intergenerational transmission, education, unemployment, degree of urbanisation, couples with three or more children, and pensioners. The second category consists of necessities such as an indoor toilet, a refrigerator and a washing machine.

It is hard to refer to work conducted in Korea because there is no research into which variables have an impact on self-assessment. For this reason, this section examines which variables are discussed in Korea in relation to two of the categories identified by Ferge (2000), namely demographic and sociological factors and static living conditions. In relation to demographic and sociological factors, when examining the variables discussed in Kim (1990), Lee *et al.* (1991) and Kim and Son (2002), the following variables can be said to be of significance, despite some differences between them in building up variables: household size, age, gender, location, health, education, occupation, income, consumption, housing, disability and illness. Regarding static living conditions associated with necessities, it will be enough to consider the necessities in the 2004 official data set, as this deals with the most comprehensive and recent items in Korea. On the basis of the variables discussed in the work of both Ferge (2000) and Korean researchers, 16 variables were chosen for analysis in this study.

These 16 variables are grouped into five factors: income, deprivation, resources other than income, standard of living other than deprivation, and general household matters. These five categories were chosen so that the variables can be dealt with in accordance with the classification of the poor in terms of income and/or

deprivation. As both income and deprivation are directly used to identify the poor in this study, each is established as a factor, which will be useful in examining and comparing how each affects self-assessment. The resources factor is composed of variables that reflect income aspects, while the standard of living factor consists of variables representing deprivation aspects. The general household matters factor is composed of variables that are regarded as less closely associated with income or deprivation aspects. The classification of these factors is not always clear-cut. For instance, in this study the variables of the number of years spent in education by the head of household and his/her work status are included as aspects of income, although some researchers may classify them as general household matters. As many studies show that education or work status is closely related to income aspects (Lee *et al.*, 1991), this study includes them in resources factor.

The composition of the five factors is as follows:

(1) *income*;

(2) *deprivation*, which is expressed as deprivation scores;

(3) *resources*, which include a range of household abilities with special regard to purchasing power. These cover human and material resources. The former consists of number of how many years the head of household spent in education and his/her work status,[42] while the latter consists of assets and debts;

(4) *standard of living*, which comprises basic deprivation and expenditure;

(5) *general household matters*, which is made up of eight variables: number of children, gender of the head of household, age of the head of household, location, marital status of the head of household, lone parents, number of disabled people and number of chronically ill people.

What the 16 variables mean and how they are manipulated for the analysis is discussed in the next section.

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[42] In light of the increasing number of situations where the head of household and spouse work together, the variable of the work status of the spouse needs to be added to the variables referring to income aspects. However, these variables are not included in the analysis of this study because when the variables are used in regression models, the variable of lone parents is excluded. As the variable of lone parents has proved to be more related to self-assessment than the variable of work status of the spouse, this study chose the variable of lone parents rather than the variable of the work status of the spouse.

4.2.2 Defining[43] and manipulating variables

4.2.2.1 Income

In this set of variables, income means equivalent monthly income before tax for a 4-person household,[44] as discussed in Chapter 3. The figure for income is produced by adding up the cash income of all household members shown in the data set (see Appendix 1). It does not include non-cash income such as medical aid or income in kind such as imputed rent and home production,[45] which is not measured in the survey.

4.2.2.2 Deprivation scores

Deprivation is estimated by the scores derived from 25 deprivation items, as discussed in Chapter 3.

4.2.2.3 Resources

Number of years spent in education by the head of household[46]

In the official survey, the level of education was measured in 8 stages: (1) not applicable (under the age of 7); (2) illiteracy; (3) elementary school; (4) middle school; (5) high school; (6) 2-year college course; (7) university; (8) graduate school. Stages (3) to (8) were subdivided into three: (1) at school/on leave of absence; (2) dropped out of school/completed courses; (3) graduated. In order to use this data to calculate years the head of household has spent in education, this study allocates half

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[43] The definition of these variables is based on the internal instruction for the 2004 survey prepared by MOHW and KIHASA in 2004.

[44] According to the internal instruction, a household is defined as a person living alone or a group of people living and eating meals prepared together (KIHASA, 2004a: 22).

[45] Even though home production should be considered when measuring income (Piachaud, 1987), it cannot be reflected in this study due to the lack of relevant information in the official data set.

[46] The head of household is taken to be the person who is primarily responsible for the living conditions of household members (KIHASA, 2004a: 23). This definition is slightly different from the generally accepted recognition of the head of household in Korea, which is that the head should be male, unless the male has been replaced by his widow. Compared with the general concept of the head of household, the definition used in the survey has an advantage in that it can choose the person actually in charge of household living conditions. On the other hand, this definition may be thought problematic when determining the head of household composed of a couple, or of independent adults. However, as mentioned above, since the head of household is traditionally male, the head of households composed of a couple will generally be male. In the case of households composed of independent adults, surveyors will have to rely on their own judgement.

the required years[47] needed for graduation when a head of household is at school/on leave of absence or has dropped out of school/completed courses, and a full year for graduation. The years in education are calculated by adding the allocated years to the years required for previous levels of education.

Work status of the head of household

The survey divides work status into 10 categories: (1) not applicable (under the age of 14); (2) permanent employee with an employment contract exceeding one year; (3) temporary employee with an employment contract of between one month and one year; (4) temporary employee with less than one month of work; (5) temporary employee in the public sector; (6) employer; (7) self-employed; (8) unpaid worker for their own home factory, store, etc.; (9) unemployed; (10) not belonging to the above categories as aged 15 or over. Since I think the classification is too detailed to be used for the analysis in this study, I reduced the variables to five: firstly, a category of 'permanent employee' equivalent to (2) in the survey; secondly, a category of 'employer/self-employed', which includes (6) and (7) in the survey; thirdly, a category of 'temporary employee', which includes (3), (4) and (5) in the survey; fourthly, a category of 'unemployed', which refers to (8) in the survey; fifthly, a category of 'other', which includes the remaining groups in the survey.

The five categories are classified according to the features of the work status. The category of 'permanent employee' refers to a normal employee in Korean society, while the category of 'employer/self-employed' is made up of groups that run their own company, factory, store, etc. The category of 'temporary employee' represents unstable working status. The category of 'unemployed' is independently established as it is regarded as one of the most vulnerable groups. The category of 'other' is made up of the remaining groups that are less closely related to work status. As a result, five dummy variables are created for the analysis.

Assets

Assets include properties, financial assets such as savings, stocks and bonds, farm machinery, agricultural and stockbreeding products, cars, membership cards, precious metals, etc.

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[47] The required years are as follows: 6 years for elementary school; 3 for middle school; 3 for high school; 2 for 2-year college course; 4 for university; at least 2 for graduate school.

Debts

Adding up credit, personal loans, returnable deposits, credit card balances, etc. produces the variable of debts. However, business debts are excluded since they can be regarded as an investment.

4.2.2.4 Standard of living

Expenditure

Expenditure includes a wide range of daily living costs, such as food, clothing, housing, leisure, education, taxes, social contributions, etc.

Basic deprivation scores

Basic deprivation scores are calculated by adding a score of 1 whenever households are deprived of one of four basic items.[48] These four items include 'missing out on a meal due to lack of money', 'disconnected from electricity, telephone, water due to lack of money', 'no heating due to lack of money' and 'no treatment in hospital due to lack of money'. Basic deprivation scores range from 0, when households are deprived of nothing, to 4, when households are deprived of all four items.

4.2.2.5 General household matters

Number of children in the household

The age of 18 is chosen to distinguish children from adults, as a person over the age of 17 is regarded as an adult in Korea. Thus, adding up the number of children aged under 18 gives the variable of number of children.

Gender of the head of household

The variable of the head of household's gender itself is self-evident. This variable is created to examine whether or not there is a difference in self-assessment by males and females.

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[48] Here, a score of 1 is added for calculating basic deprivation scores because the perception of whether or not the items are a necessity is not available in the data set.

Marital status of the head of household

The survey measures the marital status of the head of household. There are 6 different statuses: married, widowed, divorced, separated, single and not applicable (under marriageable age). Since these variables are regarded as too detailed, they are regrouped into three: married/not applicable; single; widowed/divorced/separated. There will be no problem with regarding 'married/not applicable' as a variable for the status of 'married' because only one household has the status of 'not applicable'. For this reason, this study regards the variable of 'married/not applicable' as a variable representing the status of 'married'. As all three variables 'widowed', 'divorced' and 'separated' represent renewed single status, they have been compressed into the one variable of widowed/divorced/separated for this study.

Age of the head of household

This study divides the head of household's age into five categories in order to capture the features of each age group. These categories are: households below 30; 30-39; 40-49; 50-64; over 64.

Location

The survey classified location under four headings: Seoul (the capital city of Korea), big cities, medium or small cities, and rural areas. However, this classification is unusual in that Seoul is classified under an independent heading. In Korea, it is customary to divide location into three groups: big cities including Seoul; medium or small cities; and rural areas. This study follows the custom of dividing location into these three groups. Big cities are those with 1,000,000 or more inhabitants; medium or small cities have 50,000 to 1,000,000 inhabitants, and rural areas have 50,000 or fewer inhabitants.

Lone parents

Households composed of a father or a mother with unmarried children are classified as lone parent households.

Number of disabled people

In the survey people are classified as disabled if they can be regarded as disabled according to the 'Welfare Act for Disabled Persons', regardless of whether they are registered as such. The number of disabled people is calculated by adding up the number of disabled persons in the household concerned.

Number of chronically ill people

Chronically ill people are those persons undergoing medical treatment due to a chronic condition.[49] This variable is produced by adding up the number of chronically ill people in the household.

Table 4.4 Factors and variables

Factors	Variables	Code
Income	(1) Income	
Deprivation	(2) Deprivation scores	
Resources	(3) Number of years spent in education by the head of household	
	(4) Work status of the head of household (Dummy)	0. Permanent employee (reference group) 1.Employer/self-employed 2.Temporary employee 3.Unemployed 4. Other
	(5) Assets	
	(6) Debts	
Standard of living	(7) Basic deprivation scores	
	(8) Expenditure	
General household matters	(9) Number of children	
	(10) Gender of the head of household (Dummy)	0. Female (reference group) 1. Male
	(11) Age of the head of household (Dummy)	0. 65+ (reference group) 1. < 30 2. 30-39 3. 40-49 4. 50-64
	(12) Location (Dummy)	0. Big cities (reference group) (population 1 million +) 1. Medium or small cities (population between 50,000-1,000,000) 2. Rural areas (population below 50,000)
	(13) Marital status of the head of household (Dummy)	0. Married (reference group) 1. Single 2. Separated/divorced/widowed
	(14) Lone parents (Dummy)	0.Neither single mother nor father 1.Single mother 2.Single father
	(15) Number of disabled people	
	(16) Number of chronically ill people	

[49] There is no clear explanation of what constitutes chronic illness in the instructions for the survey. However, as they contain the expression 'continuous treatment', chronic illness is likely to mean conditions requiring long-term treatment.

The factors and variables discussed above are shown in Table 4.4. The column on the far left arranges the five factors, while the middle column shows the 16 variables. "(Dummy)" means that the variables are composed of dummy variables. As to the variables of income, assets, debts and expenditure, in principle, logged values are used for regressions, since it is thought that the logged values are more suitable for regression. However, where the correlation coefficient between each of the four variables and self-assessment derived from raw data is larger than those from logged data, the former is used for analysis. The column on the far right shows the code allocated to the dummy variables. With these variables, this study explores which variables have an impact on self-assessment.

4.3 Conclusion

This chapter has discussed how to measure self-assessment by Korean households, which include poor households, and how to set up the variables that are believed to have an impact on self-assessment. As to the issue of how to measure self-assessment, this study has shown that self-assessment was measured by employing the 10-point scale of Q1. With regard to establishing variables, this study set up five factors consisting of 16 variables.

The next chapter explores self-assessment by Korean households using the 10-point scale and the 16 variables, and examines which variables have an influential impact on self-assessment. Although the purpose of this study is to explore self-assessment by the poor, it will be useful first to examine self-assessment by Korean households, as this provides an opportunity both to consider perceptions of poverty in Korean households and to compare this with self-assessment by the poor.

CHAPTER 5. SELF-ASSESSMENT BY KOREAN HOUSEHOLDS

Chapter 5 explores self-assessment of their situation by Korean households, while Chapters 6 to 8 respectively investigate self-assessment by the income poor, the deprivation poor and the consistently poor. The same format is used to investigate self-assessment by each of the four groups in these chapters. It is explored in terms of both what their self-assessment looks like and which of the 16 variables have an impact on their self-assessment. The investigation into self-assessment by each group shows that self-assessment by Korean households and the three kinds of the poor is quite negative. Moreover, it reveals that the extent of the impact of the variables on self-assessment varies according to each group.

With regard to the identification of the poor, Chapters 6 to 8 confirm the possibility raised by the pilot survey, that the income poor may not closely match the deprivation poor, since analysis in these chapters shows that there is only a 50% overlap between the income poor and the deprivation poor. This also shows that the consistently poor, who are both income poor and deprivation poor, should be dealt with as a distinct group separate from the income poor or the deprivation poor. Thus, it can be said that an independent exploration of self-assessment by these three kinds of poor is worthwhile.

As a starting point to explore self-assessment by the poor, Chapter 5 investigates self-assessment by all sample households in the data set. As the sample represents Korean households, the investigation into their self-assessment can be said to be an exploration of self-assessment by Korean households. Investigating self-assessment by the population is significant in that it examines the perception of poverty among Korean households as a whole, providing an opportunity to compare their self-assessment with self-assessment by each of the three groups of poor.

Chapter 5 is organised as follows. Section 5.1 explores what self-assessment by Korean households looks like. Section 5.2 examines the relationship between their self-assessment and the 16 variables set up in Section 4.2. On the basis of this investigation into these relationships, Section 5.3 discusses the extent to which certain variables have an impact on self-assessment. Section 5.4 offers a conclusion for this chapter.

5.1 Description of self-assessment by Korean households

In Chapter 4, this study discussed how Q1, "Please tick an appropriate score that indicates your household's economic situation?" (on a 10-point scale), is used to measure self-assessment by Korean households. The meaning of each score on the scale was interpreted as shown in Table 4.3 (see Section 4.1). This section uses that interpretation to examine self-assessment by the population.

Table 5.1 below presents the number of households in each self-assessment band, enabling us to describe how Korean households perceive themselves.

Table 5.1 Number of households in each self-assessment band

	Very poor	Fairly poor	Slightly poor	Low-middle position	Middle position	Upper-middle position	Well off	Slightly more well off	Fairly well off	Very well off
Self-assessment	1	2	3	4	5	6	7	8	9	10
% (Number of households in data set)	9.4 (2,400)	12.5 (3,199)	18.8 (4,810)	17.3 (4,421)	25.1 (6,405)	13.2 (3,379)	2.7 (700)	0.8 (198)	0.1 (29)	0.1 (21)

Table 5.1 shows that 9.4% of households gave a self-assessment of 1, indicating 'very poor'. There was a steady increase between the number of households assessing themselves as very poor and those seeing themselves in the 'middle position' of 5 (25.1% of households), with a slight decrease between self-assessments of 3 and 4. Beyond a self-assessment of 5, however, the number of households decreases sharply to 2.7% giving a self-assessment of 7, and staying below 1% for self-assessments of 8, 9 and 10. These differences indicate that generally speaking, Korean households have a negative perception of their status.

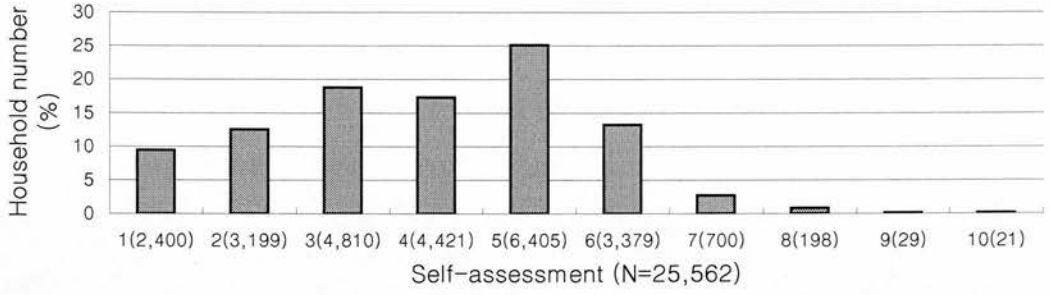
This negative self-assessment becomes striking when comparing the number of households giving lower self-assessments of 1 to 5 with the number giving higher self-assessments of 6 to 10. At respectively 83% and 17%, we see that the former group is overwhelmingly larger than the latter. Thus, it can be said that the self-perception of Korean households is quite negative.

The negative perception of Korean households can be also confirmed by comparing the number of households in the three poorest positions with those in the top four bands representing a well off position. While 41% of households see themselves as in the poor position (self-assessments of 1 to 3), only 4% of households

assess their situation as well off (self-assessments of 7 to 10). This big difference between the two illustrates the negative self-assessment by Korean households.

In Figure 5.1 below, a bar chart based on Table 5.1, the negative perception of the population can be visually ascertained by the pattern of the bars, which show that the number of households standing on the lower self-assessments (1 to 5) or on self-assessments of being poor (1 to 3) greatly surpasses that of households on the upper self-assessments (6 to 10) or on self-assessments of being well off (7 to 10).

Figure 5.1 Number of households according to self-assessments



We noted that 41% of households gave self-assessments of 1 to 3, which refer to the poor position. When this percentage is converted into the actual number of households in Korea, it produces a figure of about 6 million households, as seen in Table 5.2 below. And when this number of households is transformed into the actual number of individuals, it is seen that about 17 million people see themselves as poor.

Table 5.2 Number of households and individuals that see themselves as poor

Self-assessment	Number of households[50]	Number of individuals[51]
Very poor (self-assessment of 1)	1,460,642 (9.4%)	3,432,509 (7.2%)
Fairly poor (self-assessment of 2)	1,942,343 (12.5%)	5,069,515 (10.7%)
Slightly poor (self-assessment of 3)	2,921,283 (18.8%)	8,500.934 (17.9%)
Poor position (self-assessments of 1 to 3)	6.324,268 (40.7%)	17,002,958 (35.9%)
Whole population	15,538,741 (100%)	47,393,160[52] (100%)

[50] The KNSO projects the number of Korean households as 15,538,741 as of 1st November 2004. The number of households in each self-assessment band is calculated by multiplying each percentage by the total number of households, 15,538,741.

[51] The number of individuals is provided by multiplying the number of households concerned by the average number of household members, which is calculated according to each group by the analysis of the data set used in this study. The average number of members is analysed as follows: 2.35 for households giving a self-assessment of 1, 2.61 for households giving a self-assessment of 2 and 2.91 for households giving a self-assessment of 3.

[52] Two methods can be used to calculate the number for the total population,. The first method uses the total population projected by KNSO. In 2004, KNSO projected the total Korean population as 48,082,163. The second method calculates the total population by multiplying the total number of households by the average number of household members in the data set used in this study. As analysis of the data set used in this study generates the average number of members as 3.05, it means that the total population amounts to 47,393,160, when the figure of 15,538,741 is used as the total

So far, we have described self-assessment of their situation by Korean households and confirmed that their self-perception is negative, to the extent that 41% of Korean households see themselves as poor. The next section examines the relationship between self-assessment by Korean households and the 16 variables established in Section 4.2 as a preliminary to exploring which variables have an impact on self-assessment.

5.2 Relationship between self-assessment by Korean households and the sixteen variables

As discussed in Section 4.2, this study established 16 variables that are thought to have an impact on self-assessment. Before using regression models to explore their impact on self-assessment, this section investigates the relationship between self-assessment and each of the 16 variables. The investigation into these relationships is made both by looking at the characteristics or composition of households in each self-assessment band, and by using statistical analysis such as Pearson's, Cramer's V and Gamma. This is expected to be helpful in understanding the features of households according to their self-assessment, as well as in examining which of the 16 variables need to be included in regression models, which will be discussed in Section 5.3.

5.2.1 Income

Figure 5.2 below shows the mean and the median household incomes recorded during self-assessments by Korean households. It can be seen that their self-assessment has a positive relationship with both the mean and the median incomes, although beyond a self-assessment of 7, the pattern of mean and median incomes is

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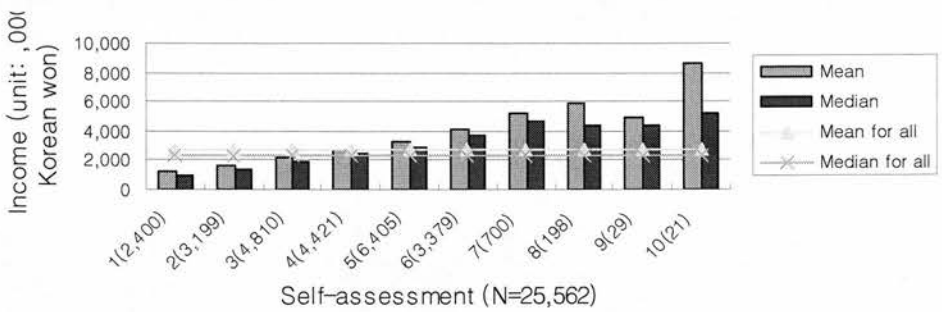
number of households. This study chose the second method to calculate the Korean population. There are two reasons for this. First, although both methods give different results for the total population, namely, 48,082,163 by the first method and 47,393,160 by the second method, the difference of 699,003 is unlikely to be serious as it only accounts for 0.15% of the total population. Given the context, it is expected that employing the second method for the data set used by this study will make future analysis of this study more consistent. Second, the figure of 48,082,163 given by the first method is derived from the projection based on the Population and Housing Census conducted by KNSO in 2000 (the census is conducted every fifth year), while the figure of 47,393,160 given by the second method is the data obtained by the national survey in 2004. Therefore, the latter can be said to better than the former in that the latter is more recent.

somewhat different from the pattern between self-assessments of 1 to 7.[53] The positive relationship between income and self-assessment is supported by their correlation coefficient, which is 0.413[54] (Pearson's r[55]), significant at the level of 0.001. Figure 5.2 below and the correlation coefficient show that as their income increases, households think of themselves as less poor or more well off, suggesting that income will have an impact on self-assessment by Korean households.

Figure 5.2 Mean and median income shown in self-assessments



5.2.2 Deprivation scores

As discussed in Chapter 3, deprivation is estimated in this study by deprivation scores derived from 25 deprivation items. Therefore, the investigation into the relationship between deprivation and self-assessment is conducted using deprivation scores.

Figure 5.3 below shows that both the mean and the median deprivation scores decrease steadily between self-assessments of 1 and 7, and then remain around a score of 1 beyond a self-assessment of 7 in the mean deprivation scores, and around a score of 0 in the median deprivation scores, even though there is an increase in the

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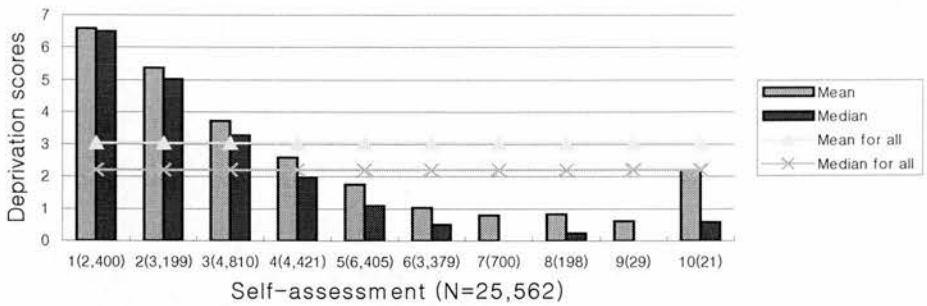
[53] The different pattern in self-assessments of 8 to 10 is not crucial in examining the relationships between income and self-assessment, since the number of households in these bands is small: 198 households giving a self-assessment of 8, 29 households giving a self-assessment of 9, and 21 households giving a self-assessment of 10, as seen in Table 5.1. The total number of these households (248) accounts for 1% of the total sample households. Therefore, when looking at Figure 5.2, it is useful to focus on the pattern in self-assessments of 1 to 7. This point also applies to other figures showing the relationships between self-assessment and other remaining variables.

[54] Pearson's r is calculated by analysis of the relationship between self-assessment and logged income rather than raw income. The correlation coefficient of self-assessment and raw income is 0.369 (Pearson's r). Thus, for relevant regression models, logged income, rather than raw income, is used as a variable.

[55] Henceforth, unless a specific explanation is provided, the correlation coefficient for this study means Pearson's r.

mean and the median scores at a self-assessment of 10.[56] These patterns suggest that the relationship between deprivation scores and self-assessment is negative. This negative relationship is confirmed by their correlation coefficient, which is -0.571, significant at the level of 0.001. The comparison of the coefficient for deprivation (-0.571) with the coefficient for income (0.413) suggests that self-assessment by Korean households is more closely related to deprivation than to income.

Figure 5.3 Mean and median deprivation scores generated by self-assessments



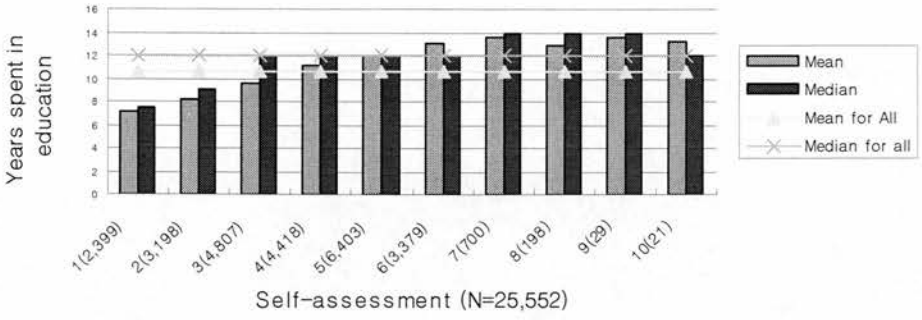
5.2.3 Resources

Number of years spent in education by the head of household

Figure 5.4 below deals with the mean and the median number of years spent in education by the head of household shown in each self-assessment band. It shows that there is a positive relationship between self-assessment and the number of years spent in education, even though the mean number of years spent in education stays at around 13 in self-assessments of 7 to 10, and despite small differences in the median self-assessments, particularly in self-assessments of 3 to 10. This positive relationship is supported by their correlation coefficient, which is 0.401, significant at the level of 0.001.

[56] The increase in mean deprivation scores for a self-assessment of 10 is due to the effects of the existence of two high extremes, whose deprivation scores are 10.81 and 15.09. The two deprivation scores evidently show that, in terms of their deprivation score, the respondents' situation cannot be assessed as a self-assessment of 10, which refers to 'very well off'. Thus, it could be argued that it is better to remove the extremes for the analysis. However, this study does not remove extremes, partly because it respects respondents' judgement, which is a basis of this thesis, and partly because the effect of extremes is not crucial. Considering that this thesis uses 25,562 samples, the existence of the two extremes has little effect.

Figure 5.4 Mean and median number of years spent in education by the head of household recorded in self-assessments

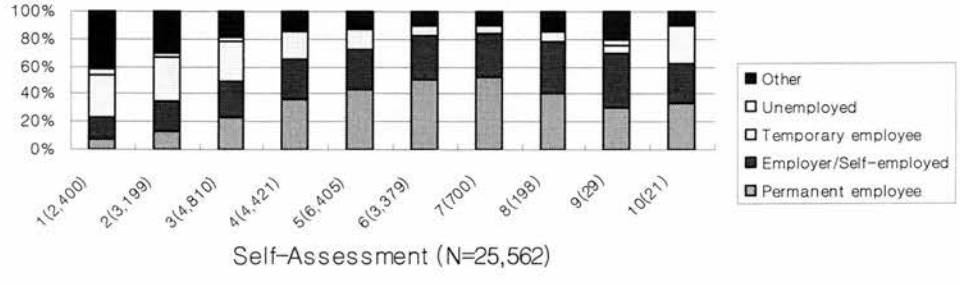


Work status of the head of household

As discussed in Section 4.2, this study classifies the head of household's work status in the five sub-categories of 'permanent employee', 'employer or self-employed', 'temporary employee', 'unemployed' and 'other', which includes unpaid workers in their own home factory and store, or students, etc.

On the basis of this classification, Figure 5.5 shows the composition of each category at the various levels of self-assessment. It is generally shown that as self-assessment becomes more positive, the ratio of 'temporary employee', 'unemployed' and 'other' decreases, while the ratio of 'permanent employee' and 'employer or self-employed' increases. This pattern suggests that the head of household's work status is to a certain extent related to self-assessment. As the value of Cramer's V[57] in showing the relationship between work status and self-assessment appears to be 0.207, significant at the level of 0.001, we can confirm that the head of household's work status is related to self-assessment in some degree.

Figure 5.5 Head of household's work status recorded in self-assessments

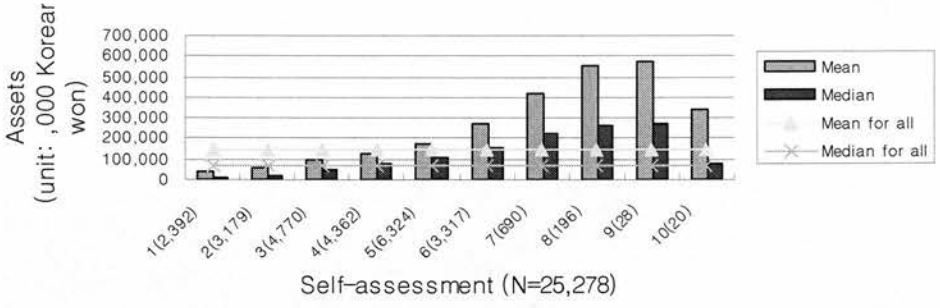


[57] As this study regards the head of household's work status as a nominal variable, Cramer's V is used to examine the relationship between self-assessment and the head of household's work status.

Assets

Figure 5.6 below, which shows the mean and the median assets declared in the self-assessments, demonstrates that the relationship between assets and self-assessment is positive. As self-assessment improves, there is an exponential increase in both mean and median assets between self-assessments of 1 and 9, with the exception of a self-assessment of 10. This positive relationship is confirmed by the correlation coefficient for assets and self-assessment, 0.456,[58] significant at the level of 0.001.

Figure 5.6 Mean and median assets declared in self-assessments



Debts

Figure 5.7 below demonstrates the relationship between mean debts and self-assessment. As self-assessment becomes more positive, the mean debts increase very slightly, with the exception of a self-assessment of 9. In contrast, the median debts are very random according to the self-assessment bands, as seen in Figure 5.8 below.[59] These two figures show that the relationship between debts and self-assessment is very weak. This is confirmed by their correlation coefficient of 0.036,[60] significant at the level of 0.001. On the other hand, the very substantial differences between the distribution of mean and median debts show that debts might not be a good indicator in reflecting living conditions. For example, considering that credit card balances can indicate both a high and a low standard of living, we could argue that debts might be regarded as a poor indicator of living conditions.

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[58] This Pearson's r is obtained by analysis of the relationship between self-assessment and logged assets rather than raw assets. The correlation coefficient of self-assessment and raw assets is 0.213. Therefore, logged assets are used for relevant regression models

[59] As the median debt is too small to be simultaneously demonstrated in Figure 5.7, which shows mean debts, Figure 5.8 is presented to show median debt.

[60] The coefficient is calculated by analysing the relationship between self-assessment and raw debt, rather than logged debt. The correlation coefficient of self-assessment and logged debt is 0.012, significant at the level of 0.1. Therefore, raw debt is used for the relevant regression models.

Figure 5.7 Mean debts declared in self-assessments

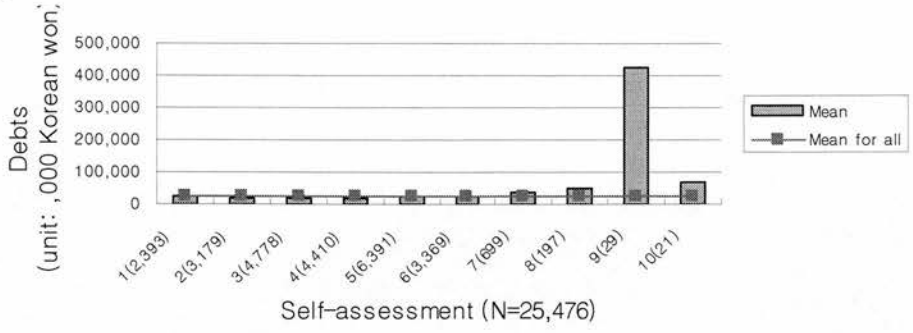
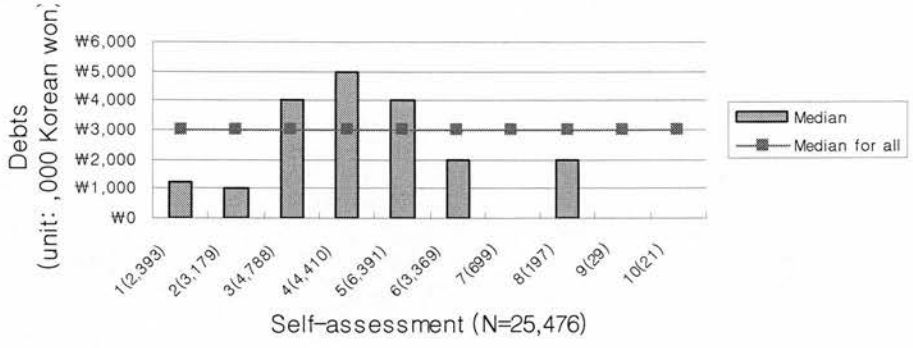


Figure 5.8 Median debts declared in self-assessments



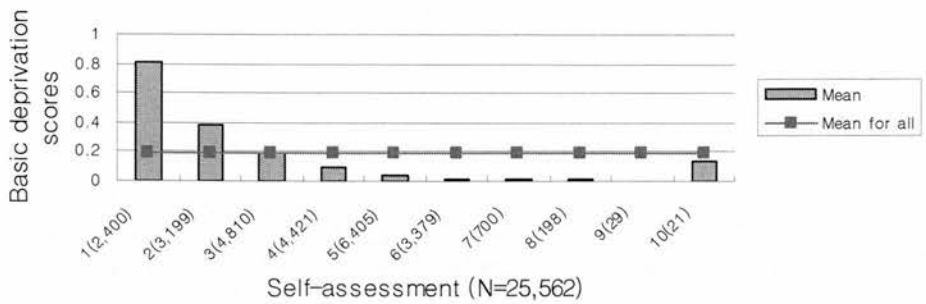
5.2.4 Standard of living

Basic deprivation scores

Figure 5.9 below provides the mean[61] basic deprivation scores derived from four basic deprivation items: 'missing out a meal', 'disconnected from electricity, telephone or water', 'no heating' and 'no treatment in hospital' due to lack of money, as discussed in Section 4.2.2.4. In this figure, the relationship between the basic deprivation scores and self-assessment appears to be negative. The correlation coefficient, which is -0.333, significant at the level of 0.001, provides the same result. On the other hand, Figure 5.9 also shows that households giving self-assessments of 1 and 2 suffer much more severe basic deprivation than average. This suggests that meeting very basic needs is still a problem for the severely poor.

[61] The median of basic deprivation scores appears to be 0 in all self-assessment bands.

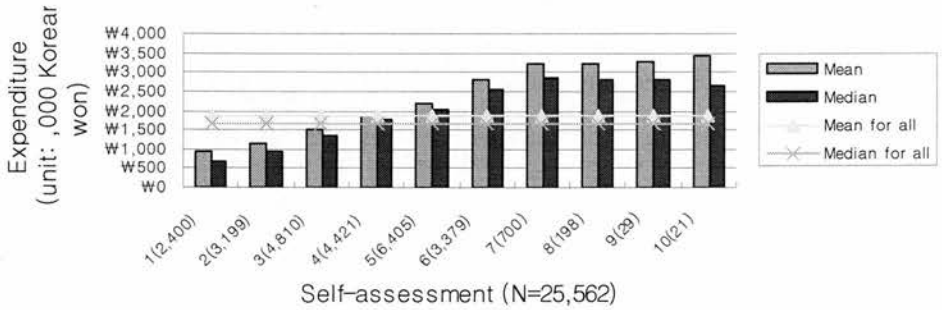
Figure 5.9 Mean basic deprivation scores given in self-assessments



Expenditure

Figure 5.10 below shows the mean and the median expenditure declared in the self-assessments. We see that households with greater expenditure give higher self-assessment, which confirms that self-assessment has a positive relationship with expenditure. This positive relationship is taken for granted, since enhanced quality of life is generally due to increased expenditure. Thus, the issue here is how closely self-assessment is related to expenditure. The correlation coefficient of 0.507,[62] significant at the level of 0.001, which is second to that of deprivation scores, indicates that expenditure has a very positive relationship with self-assessment.

Figure 5.10 Mean and median household expenditure declared in self-assessments



5.2.5 General household matters

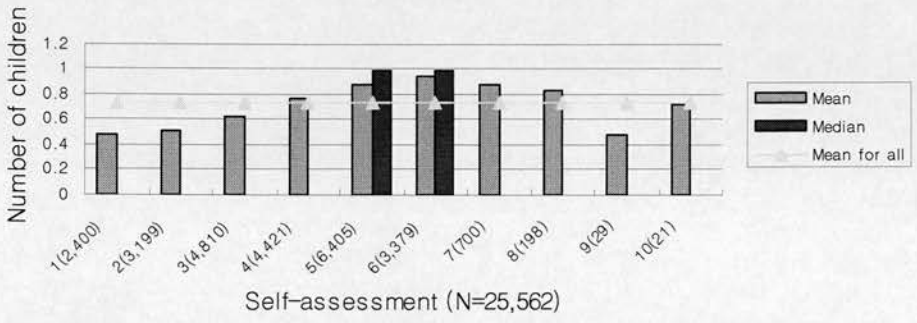
Number of children in the household

Figure 5.11 below shows the mean and the median number of children recorded in the self-assessments. It seems that the relationship between the number of children

[62] The correlation coefficient is derived from the relationship between the self-assessment and logged expenditure. The correlation coefficient for raw expenditure appears to be 0.487 (Pearson's r). Thus, logged expenditure is used for the relevant regression models.

and self-assessment is weak, since there is a somewhat different pattern between self-assessments of 1 to 6 and self-assessments of 7 to 10, especially when looking at pattern of the mean. As the correlation coefficient for them is analysed as 0.162, significant at the level of 0.001, this relationship cannot be said to be strong.

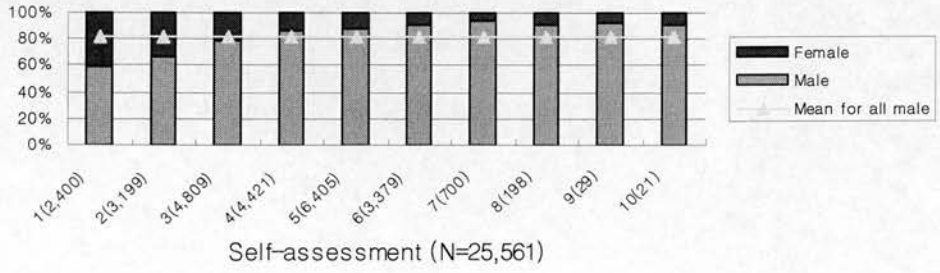
Figure 5.11 Mean and median number of children recorded in self-assessments



Gender of the head of household

Figure 5.12 below shows the percentage of households shown in the self-assessments as having a male or a female head. In the lower self-assessment bands more households have a female head than a male head, while this pattern reverses in the upper self-assessment bands. This pattern shows that female-headed households give a more negative self-assessment than male-headed households. The value of Gamma in showing the relationship between gender and self-assessment appears to be -0.425, significant at the level of 0.001, when the variable of the head of household's gender is used as ordinal variables in order of female- and male-headed households. The value therefore confirms that female-headed households have a more negative self-perception than male-headed households.

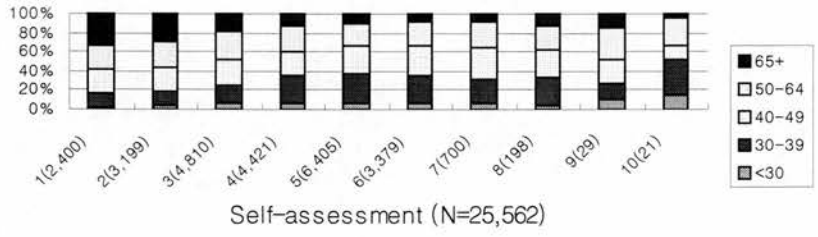
Figure 5.12 Gender by self-assessments



Age of the head of household

The variable of the head of household's age is made up of sub-five groups, 'under 30', '30-39', '40-49', '50-59' and '65 or over', as discussed in Section 4.2. Figure 5.13 below seems to show that as self-assessment becomes more positive the percentage of the sub-category '65 or more' decreases. In contrast, it is shown that there is no striking consistent pattern in the percentages of self-assessment in other sub-groups. As this study regards the five categories as ordinal variables, Gamma is used to examine the relationship between the head of household's age and self-assessment. The value of Gamma appears to be -0.204, significant at the level of 0.001. This shows that, to some extent, the head of household's age has a negative relationship with self-assessment.

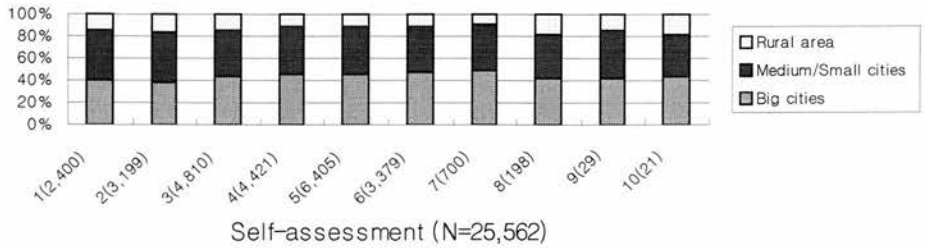
Figure 5.13 Age by self-assessments



Location

Figure 5.14 shows the percentage of households living in big cities, medium or small cities and in rural areas, as recorded in the self-assessments. This figure shows that there is little variation in the percentages between self-assessments of 1 and 10, which means that the relationship between location and self-assessment is weak. This weak relationship is confirmed by the value of Gamma, -0.074, significant at the level of 0.001, when the variable of location is used as ordinal variables.

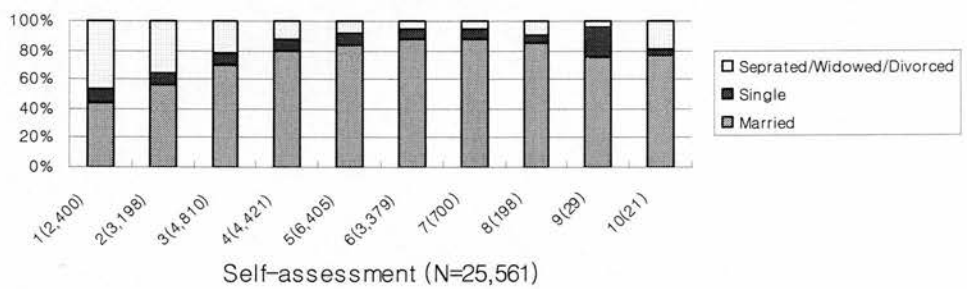
Figure 5.14 Location recorded in self-assessments



Marital status of the head of household

Figure 5.15 below shows the percentage of heads of household declaring their marital status as married, single, and separated/widowed/divorced. In this figure, it can be seen that there is little variation in the percentages recorded by households with a single head, whilst in households where the head is separated/widowed/divorced, the differences between the percentages are very large, and are particularly high in self-assessments of 1 to 3. From this pattern, it seems evident that households where the head is separated/widowed/divorced have a more negative perception than those where the head is married. When the marital status of the head is used as an ordinal variable in order of 'married', 'single' and 'separated/widowed/divorced', the value of Gamma appears to be -0.436,[63] significant at the level of 0.001.

Figure 5.15 Marital status given in self-assessments



Lone parents

Figure 5.16 below shows the percentage of households where the head is recorded in the self-assessment as a single mother, a single father or the others such as married and single. Because households headed by the others greatly outnumber households with single parents, it is hard to see the pattern of single parents in this figure. For this reason, Figure 5.17, which deals solely with single parents, is also presented below.

[63] The order of sub-variables may have an effect on the value of Gamma. However, it does not mean that marital status is not associated with self-assessment. For example, when the order is changed to 'married', 'separated/divorced/widowed' and 'single', the value of Gamma appear to be -0.382, significant at the level of 0.001.

Figure 5.16 Households where the head is recorded as a single mother, a single father or others in self-assessments

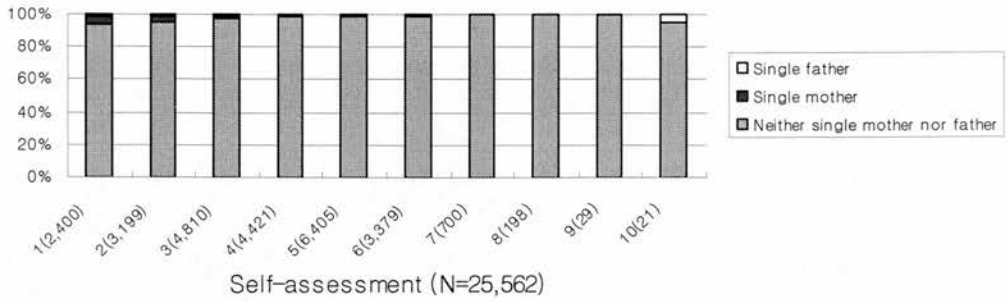


Figure 5.17 Households where the head is recorded as a lone parent in self-assessments

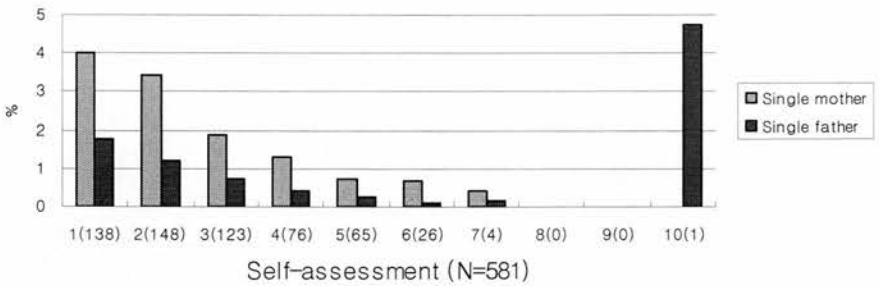


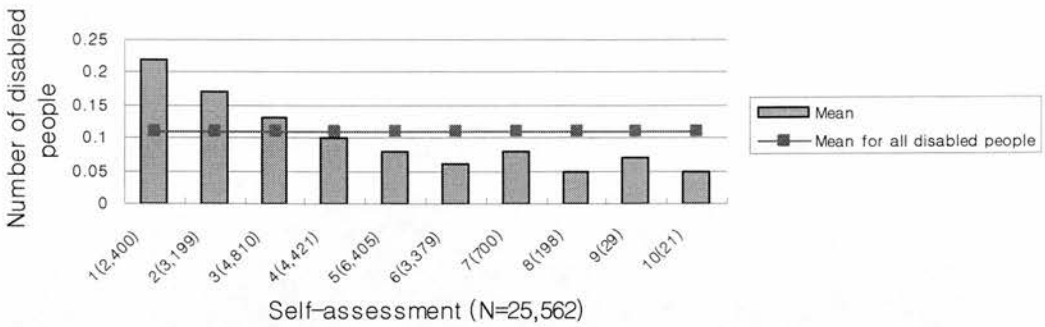
Figure 5.17 shows that as self-assessment becomes more positive, the percentage of households headed by a single mother or single father decreases steadily. This indicates a negative relationship between lone parents and self-assessment. When the variable of lone parents is used as an ordinal variable in the order 'neither single mother nor father', 'single mother' and 'single father', the value of Gamma appears to be -0.457, significant at the level of 0.001.

Number of disabled people

Figure 5.18 below shows the mean[64] number of disabled people recorded in the self-assessments. It reveals a negative relationship between the number of disabled people and self-assessment, since the mean number of disabled people decreases steadily as self-assessment becomes more positive. This is confirmed by their correlation coefficient, which is -0.131, significant at the level of 0.001.

[64] The median of disabled people appears to be 0 in all self-assessment bands.

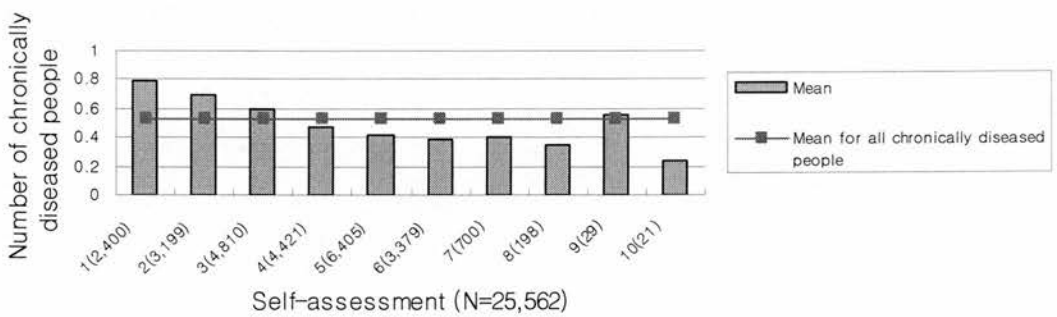
Figure 5.18 Mean number of disabled people recorded in self-assessments



Number of chronically ill people

Figure 5.19 below shows the mean[65] number of chronically ill people recorded in the self-assessments. Like the relationship observed in the variable for the number of disabled people, this figure shows a negative relationship between the number of chronically ill people and their self-assessment. Their correlation coefficient is analysed to be -0.181, significant at the level of 0.001.

Figure 5.19 Mean number of chronically ill people recorded in self-assessments



This investigation into the relationship between the 16 variables and self-assessment has shown that all the variables have a more or less positive or negative relationship with self-assessment. Thus, we can now confirm that all 16 variables can be used for regression. The next section deals with the impact of these 16 variables on self-assessment using regression.

5.3 The impact of variables on self-assessment by Korean households

This study employs a multiple regression analysis using SSPS to investigate the

[65] The median of chronically ill people appears to be 0 in all self-assessment bands.

degree of the effect of these 16 variables on self-assessment. For the analysis, this study sets up six models, composed of five partial models in accordance with the five factors discussed in Section 4.2: income (Model I), deprivation (Model II), resources (Model III), standard of living (Model IV) and general household matters (Model V), as well as one full model (Model VI) where all 16 variables are included.

In using the regression of the six models, this study focuses on an investigation into two issues. The first concerns how much each model explains self-assessment, and the second examines how much each variable impacts on self-assessment. As the second investigation reveals the degree to which each variable has an impact, it will be helpful in examining which variable contributes more to the formation of self-assessment. In relation to the exploration of these two aspects, Table 5.3 below offers the relevant information obtained from the regression of the six models[66].

5.3.1 Explanatory power of the models

The adjusted R^2s located at the bottom of Table 5.3 show the extent to which each model explains the self-assessment by Korean households. When looking at the powers of the five partial models, it can be seen that Model II for deprivation (adj. R^2 = 0.326) has the greatest explanatory power. This is followed by the power of Model III for resources (adj. R^2 = 0.311) and Model IV for standard of living (adj. R^2 = 0.305). Model I for income (adj. R^2 = 0.170) and Model V for general household matters (adj. R^2 = 0.150) explain self-assessment at a similar level, while Model VI including all the variables has 42% explanatory powers regarding self-assessment.

The explanatory powers of the six models offer at least three results worth noting. Firstly, the power of Model II for the variable of deprivation is twice as great as that of Model I for the variable of income. This means that deprivation scores represent self-assessment better than income. When this result is applied to the issue of identifying the poor, it is inferred that, at least from the viewpoint of self-assessment, deprivation scores are better at identifying the poor than income.

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[66] Multicollinearity does not appear to be problematic in any of these six models when all their variance inflation variables (VIF) are very low. Except for Models I and II, which use one variable, the highest VIF of Models III to VI appears to be as follows: 1.676 in the variable of the working status of others in Model III; 1.060 equally in the variables of basic deprivation scores and expenditure in Model IV; 2.609 in the variable of the number of heads of household aged between 30-39 in Model V; and 2.510 in the variable of expenditure in Model VI.

Table 5.3 Multiple regression of the six models in Korean households

Factors/Variables	Model I (ß)	Model II (ß)	Model III (ß)	Model IV (ß)	Model V (ß)	Model VI (ß)
Income	0.413					0.098
Deprivation scores		-0.571				-0.270
Resources						
Years spent in education by the head			0.226			0.083
Work status of the head						
- (Permanent employee)						
- Employer/ self-employed			-0.062			-
- Temporary employee			-0.178			-0.071
- Unemployed			-0.082			-
- Other			-0.152			-
Assets			0.327			0.160
Debts						
Standard of living						
Basic deprivation scores				-0.225		-0.078
Expenditure				0.453		0.154
General household matters						
Number of children						
Gender of the head: male					0.040	-
Age of the head						
- (65+)						
- < 30					0.107	0.033
- 30-39					0.138	-
- 40-49					0.110	-0.032
- 50-64					0.102	-
Location						
- (Big cities)						
- Medium or small cities					-	-
- Rural areas					-	0.042
Marital status of the head						
- (Married)						
- Single					-0.108	-
- Separated/divorced/ widowed					-0.247	-
Lone parents						
- (Neither single father nor mother)						
- Single mother					-0.026	-0.022
- Single father					-0.029	-
Number of disabled people					-0.098	-0.036
Number of chronically ill people					-0.103	-
Adjusted R^2	0.170	0.326	0.311	0.305	0.150	0.423
F	5242.660***	12385.620***	1897.631***	5604.800***	411.097***	1542.262***

*** $p < 0.001$. NB. All the standardised regression coefficients in this table are significant at the level of 0.001.[67]

[67] The significance level for the standardised regression coefficient, ß, is selected at this quite rigorous level because the data set covering 25,562 households is quite large, so that coefficients with a lower significance level than 0.001 are not so meaningful in showing the impact on self-assessment.

Secondly, Model III for resources and Model IV for standard of living share similar explanatory powers, while Model V for general household matters has half the power of either Model III or IV. This allows us to infer that although the factors of resources, standard of living and general household matters all help explain self-assessment, the first two factors are more significant in explaining self-assessment than the factor of general household matters.

Thirdly, Model VI explains 42% of self-assessment, which means that the remaining 58% cannot be explained by the 16 variables in Model VI. So how can it be explained? It seems that there could be two reasons for this. One is the limitation of the objective variables. For example, even though households may have identical conditions in all areas, their self-assessment may vary according to their mental state. The other reason is the limitation of the variables used in this study. There must be other important variables that can help explain self-assessment that have not been addressed in this study. As discussed in Section 4.2, Ferge (2000) says that the dynamics of change in living conditions have an impact on self-assessment. Religion may be another important variable. The effects of religion on self-assessment can be imagined by the statement of one of the investigators that participated in the official survey:[68]

> It seemed to me that religion has a lot of impact (on their self-assessment). In the case of pastors or for example people who rely on their faith, many of them gave a high score even though they have nothing. There was a household, which belonged to social assistance recipients. The household gave a score of 8 or 9 (though it could not live without the help of the government).

However, due to the availability of data, some important variables, such as changes in living conditions and religion, have not been addressed in this study. In this regard, the variables set up for this study are of limited use in explaining self-assessment.

5.3.2 Impact of each variable on self-assessment

In addition to how much each model explains self-assessment, it is of interest to examine to what extent each variable has an impact on self-assessment, since it

[68] Interview with Kim, Mi-Nyeo, recorded on 28th December 2004.

provides information about the degree of each variable's effect on self-assessment. In the standardised regression coefficients in Table 5.3, we can confirm the degree of each variable's impact on self-assessment. The coefficients in Table 5.3 include the coefficients in Model VI, which give a final result as to the impact of each variable. Each coefficient in Model VI represents the pure impact of each variable on self-assessment, which controls the effects of other variables. So, the coefficients in Model VI generate the most interesting results of the six models. For this reason, this study primarily focuses on interpretation of the coefficients in Model VI.

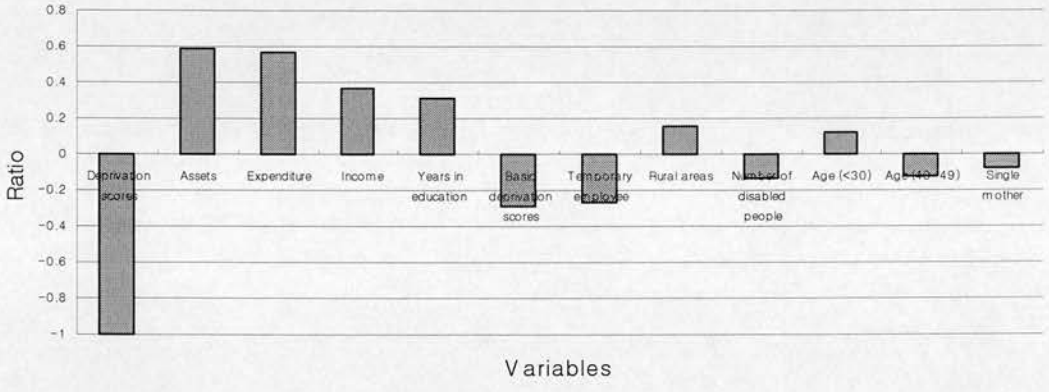
Firstly, Model VI shows that self-assessment has a positive relationship with the following six variables in order of: assets (β= 0.160), expenditure (β= 0.154), income (β= 0.098), number of years spent in education by the head of household (β= 0.083), rural areas (β= 0.042), head of household aged under 30 (β= 0.033); while it has a negative relationship with the six variables of deprivation scores (β= -0.270), basic deprivation scores (β= -0.078), head of household's status as a temporary employee (β= -0.071), head of household aged between 40-49 (β= -0.032), number of disabled people (β= -0.036) and single mother (β= -0.022). However, among these variables, since the coefficient of the variables of rural areas is not significant in the partial Model V, and since the coefficient of the variable of head of household aged between 40-49 has a different direction to that in partial Model V, their impact on self-assessment should be interpreted as being very weak.[69]

Secondly, in Model VI, comparison of the values of the standardised regression coefficients can show which variable has a more impact on self-assessment. In order to conveniently compare the coefficients according to variables, Figure 5.20 below is presented by transforming the coefficients of Model VI into a ratio where the coefficient of the variable of deprivation scores is set at -1. In this figure, it can be seen that there are considerable differences in the degree of impact between variables. Compared with the degree of impact for the variable of deprivation scores, the impact of the remaining variables appears to be as follows: assets (59%), expenditure (57%), income (36%), number of years spent in education

[69] In addition, it should be emphasised that the coefficients of the dummy variables are derived from the relationship with the reference group, which means that the coefficients are changeable when the reference group is altered. Therefore, the coefficients of dummy variables should be interpreted in relation to the reference group.

by the head of household (31%), basic deprivation scores (28%), temporary employee status of the head (26%). The impact of other variables stays at around 10%. Thus, we can now say that the more severely deprived the household and the lower its assets, expenditure and income, the more negative its self-perception.

Figure 5.20 Ratio of the coefficient of deprivation scores to that of other variables



NB. The ratio of the variables is calculated against the value of deprivation scores, which is set at -1.

In relation to the explanatory powers of the six models and the impact of each variable on self-assessment, the regression results show a few points that are meaningful for poverty policies, which are considered in the next section.

5.3.3. Implications for poverty policies

5.3.3.1 Effectiveness of policy

Figure 5.20 above shows the relative extent of the influence of each variable on self-assessment. It allows us to infer that when policies focus on variables with a relatively large impact, they will be more effective in improving self-assessment by Korean households. The composition of the variables in Figure 5.20 shows that those related to income aspects or deprivation aspects have a bigger impact than the variables related to general household matters. These results imply that, although a household may suffer from an adverse condition such as old age or disability, income aspects or deprivation aspects can cover the adverse situations. For example, in the case of disabled people, we can infer from the results that disability itself does not have a big effect on their self-assessment when they do not suffer from economic

poverty. Thus, we can say that policies based on only general household features without considering income aspects or deprivation aspects would not be effective. An example of this in Korea would be the benefits given to all disabled people, regardless of their economic situation.

5.3.3.2 Identification of the poor

In relation to the issue of identifying the poor, two variables – deprivation scores and income – attract our attention because they are used to identify the poor in this study. The fact that income has less of an impact on self-assessment than deprivation scores suggests that deprivation scores would reflect self-assessment better than income. In particular, since the explanatory power of deprivation is twice as great as income (as seen in Table 5.3 above), it can be said that deprivation scores explain self-assessment by Korean households far better than income. Thus, we can conclude that, at least in terms of self-assessment by Korean households, deprivation is a better indicator than income in identification of the poor.

5.4 Conclusion

Chapter 5 explored self-assessment of their situation by Korean households. This investigation has shown that Korean households have a generally negative perception of their own situation. This negative perception was confirmed by comparing the number of households giving lower self-assessments of 1 to 5 with those giving upper self-assessments of 6 to 10. The former amounts to 83% of households and the latter to 17% of households, thus illustrating the negative self-perception among Korean households. This was further supported by the discovery that 41% of Korean households rate themselves as poor.

In order to explore what is related to this negative self-assessment, this study employed the 16 variables chosen in Section 4.2. First, the relationship between each of these 16 variables and self-assessment was examined by demonstrating the number or percentage of households in each self-assessment band, and by the use of statistical analysis to show their relationships. As a result, all the variables appear to be more or less significantly related to self-assessment.

However, since the relationship does not confirm which variables have an

impact on self-assessment or the extent of their impact, multiple regressions were used on the five partial models and one full model. These regressions showed that deprivation scores, assets, expenditure and income have a significant impact on self-assessment by Korean households. In relation to the implications for policies, the regressions also suggested that policies based on general household features alone need to be reconsidered, as they will have little effect in improving self-assessment by Korean households. Furthermore, the finding that deprivation scores have much greater explanatory powers and impact on self-assessment than income suggests that these scores are more useful than income in identifying the poor, at least in terms of self-assessment by Korean households.

CHAPTER 6. SELF-ASSESSMENT BY THE INCOME POOR

Chapter 6 explores self-assessment of their situation by the income poor. As income has been the most favoured indicator for identifying the poor in Korea, the income poor – those whose income falls below a certain threshold – can be said to be those who are conventionally regarded as poor in Korea. Thus, the investigation into their self-assessment is expected to show how those traditionally seen as poor perceive their own situation.

Chapter 6 is composed of six sections. Section 6.1 identifies the income poor using the poverty line set by the Korean government. Section 6.2 investigates how the income poor rate their situation and how many of the income poor see themselves as poor. This investigation shows that self-assessment by the income poor is more negative than self-assessment by Korean households in general, and that many of the income poor do not see themselves as poor. Section 6.3 examines the adequacy of the poverty line used to define the income poor. This will be helpful in understanding why self-assessment by the income poor is so negative. Section 6.4 explores the relationships between the 16 variables and self-assessment by the income poor as a preliminary to exploring which variables have an impact on their self-assessment. Section 6.5 investigates the extent to which these variables influence self-assessment, and Section 6.6 presents the conclusion of this chapter.

6.1 Identification of the income poor

As discussed in Section 3.2.1, this study employs the 2005 official poverty line to identify the income poor. Therefore, this section begins with a brief discussion of how the official poverty line was established, and then identifies the income poor.

The Korean government has used two methods to set up a poverty line. One is to construct it by carrying out a nationwide survey that reflects current conditions in Korean households. For this, the government commissioned the KIHASA to conduct a huge survey and suggest an income poverty line to the government. On the basis of the institute's suggestion, the government then established an income poverty line.

Since 1994, this method has been used every fifth year.[70] The other method is to establish a poverty line that is indexed to the rate of price increases. In addition to the poverty line provided through the nationwide survey, this method covers income poverty lines for the remaining four years.

It was in 2004 that the latest nationwide survey was conducted by the KIHASA to establish a poverty line. The institute suggested an income poverty line to the Korean government on the basis of this survey, and having made some adjustments the government announced a poverty line on 1st December 2004. This would be valid for the next year, 2005, which is why this study calls it the 2005 official poverty line. The monthly level of the poverty line for a standard 4-person household was set at 1,136,332 Korean won (GBP 568). This was established by the budget standard approach discussed in Chapter 2 (see Section 2.1.1.1). The government's equivalence scales discussed in Chapter 3 (see Section 3.2.2) were employed for the poverty lines for other household sizes. Like Table 3.3, Table 6.1 below shows the 2005 official poverty lines according to household size.

Table 6.1 2005 official poverty lines according to household size

Household Size	1	2	3	4	5	6
Korean Won	401,466	668,504	907,929	1,136,332	1,302,918	1,477,800
(GBP)	(201)	(334)	(454)	(568)	(651)	(739)

* When a household has more than 6 members, 174,882 Korean won (GBP 87) are added for each additional member.

This study uses the 2005 official poverty line for a 4-member household shown in Table 6.1 to identify the income poor. This is done as follows: first, the government's equivalence scales (see Table 3.2) are used to convert the income of all other household sizes in the data set into the equivalent income of a 4-member household. Since a 4-member household was selected as the standard size for the 2005 poverty lines, this study also uses the 4-member household as its standard size. Next, the equivalent household income is compared to the 2005 poverty line for a 4-member household. If the household income is lower than the poverty line of 1,136,332 Korean won, the household is identified as income poor. As a result, it was calculated that income poor households amount to 18.5% of the total population, as

[70] After 2004, this method will be employed every third year due to the amendment of the National Basic Livelihood Security Act.

shown in Table 6.2 below. When the percentage of income poor was transformed into actual numbers, it was estimated that 2,874,667 households and 6,985,440 individuals are income poor, as shown in Table 6.2 below.

Table 6.2 Number of income poor

	Income poor households	Income poor people
Number (%)	2,874,667 (18.5%)	6,985,440[71] (14.7%)
Total population	15,538,741 (100%)	47,393,160 (100%)

In 2005 the Korean government identified about eight hundred thousand households and about one and half million people as recipients of social assistance. This amounts to about 5% of households and 3% of individuals, as shown in Table 6.3 below.

Table 6.3 Number of social assistance recipients

	Number of households	Number of individuals
July 2005	792,024 (5.1%)	1,489,249 (3.1%)
Total population	15,538,741 (100%)	47,393,160 (100%)

Source: Internal Report of the Beneficiary for Basic Living (MOHW, 2005b)

When the number of income poor (18.5%) is compared with the number of recipients, it can be seen that the former is four times greater than the latter. This big difference suggests that the criteria used to identify recipients are too rigorous, to the extent that the poor, who should be protected, are not always identified as being in need of social assistance.

6.2 Description of self-assessment by the income poor

The investigation into self-assessment by the income poor is of interest in that it shows the perceptions of the group that is traditionally regarded as poor in Korea. Table 6.4 below demonstrates how the income poor assess their situation. It can be seen that the percentage of income poor decreases steadily from 28.8% giving a self-assessment of 1 to 2.6% giving a self-assessment of 6. Beyond a self-assessment of 6 the percentages stays at around 0%. This pattern generally shows that the income poor have quite a negative perception of their situation.

[71] This figure was obtained by multiplying the number of income poor households by the average number of members of income poor households (2.43), which is derived from analysis of the data set used by this study.

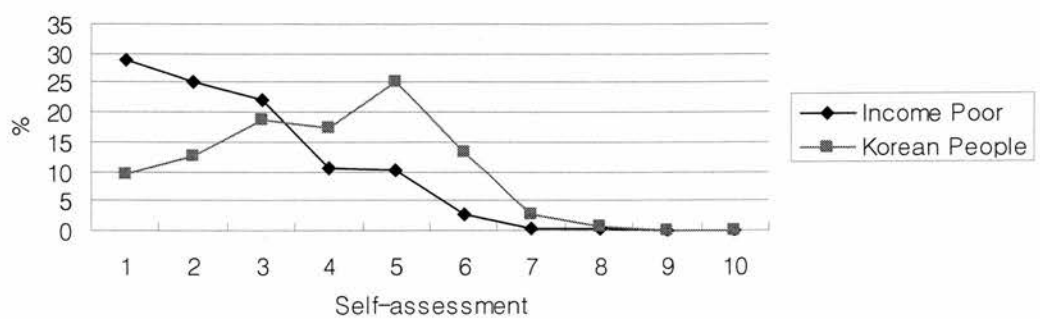
Table 6.4 Number of income poor in each self-assessment band

Self-assessment	1	2	3	4	5	6	7	8	9	10	Total
% (Number of households in data set)	**28.8** (1,361)	**25.2** (1,194)	**22.0** (1,039)	10.7 (506)	10.2 (484)	2.6 (123)	0.3 (14)	0.2 (10)	0.0 (2)	0.0 (1)	100 (4,734)
Cumulative percentage	**28.8**	**54.0**	**76.0**	86.7	96.9	99.5	99.8	100	100	100	100

This negative self-assessment by the income poor becomes striking when their self-assessment is compared to that of Korean households in general. Figure 6.1 below shows the pattern of self-assessment by the income poor and that of Korean households as a whole, demonstrating that the income poor have a considerably more negative perception of their situation than that of Korean households in general. While 29% of the income poor see themselves as very poor (a self-assessment of 1), 9% of all Korean households surveyed rate their situation as very poor. In addition, while 25% of the income poor regard themselves as fairly poor and 22% as slightly poor (a self-assessment of 2 or 3), 13% of all Korean households surveyed think of themselves as fairly poor and 19% as slightly poor. Finally, a larger percentage of all Korean households surveyed gave a self-assessment of 4 to 10 (middle or well off) than the percentage of income poor giving themselves this rating. Thus, we can conclude that the income poor have a more negative self-perception than Korean households in general.

The finding that self-assessment by the income poor is more negative than that of Korean households in general shows that in relation to identification of the poor, income has some function in distinguishing households with a negative self-perception from households with a positive self-perception.

Figure 6.1 Percentage of income poor households and Korean households rating themselves in each band



However, although income does fulfil this function to some degree, Table 6.4 above implies that this may not be sufficient. This table shows that 76% of the income poor see themselves as poor when self-assessments of 1 to 3 are interpreted as referring to a poor position, which means that 24% of the income poor do not regard themselves as poor. It can therefore be said that within the income poor, the figure of 24% shows the extent of the discrepancy between objective poverty status determined by income and subjective poverty status determined by people's opinions. In a situation where the income of the income poor is less than the 2005 official poverty line, which was set at a low level representing the bare minimum living conditions or less (see Section 6.3 for details), the figure of 24% does not seem small. This shows that the subjective perception of poverty is quite different from objective poverty status defined by income. When considering that people know their situation best, this suggests the possibility that there may be a number of income poor households who should not have been identified as poor.

Furthermore, Table 6.5 below supports the argument that the subjective perception of poverty is quite different from objective poverty status defined by income. Table 6.5 illustrates the dispersion of the income poor and the non-income poor according to each self-assessment band. In a self-assessment of 1, it is seen that 43% of households seeing themselves as very poor are not identified as income poor. In a self-assessment of 2 or 3, the percentage of households that are not defined as income poor increases to 63% or 78%. This shows that poverty status determined by income (the income poor) is quite different from poverty status determined by self-assessment (the self-assessed poor).[72] Considering that people's self-assessment reflects their situation, even though the assessment may not be objective, these big differences suggest that when income is used to identify the poor, a number of those who should have been identified as poor may not be.

[72] In this study, the self-assessed poor means those who assessed themselves as poor, i.e. households giving a self-assessment of 1 to 3.

Table 6.5 Self-assessment by the income poor and the non-income poor

Self-assessment	1	2	3	4	5	6	7	8	9	10	Total
Income poor	**56.7** (1,361)	**37.3** (1,194)	**21.6** (1,039)	11.4 (506)	7.6 (484)	3.6 (123)	2.0 (14)	5.1 (10)	6.9 (2)	4.8 (1)	18.5 (4,734)
Non-income poor	**43.3** **(1,039)**	**62.7** **(2,005)**	**78.4** **(3,771)**	88.6 (3,915)	92.4 (5,921)	96.4 (3,256)	98.0 (686)	94.9 (188)	93.1 (27)	95.2 (20)	81.5 (20,828)
Total	100.0 (2,400)	100.0 (3,199)	100.0 (4,810)	100.0 (4,421)	100.0 (6,405)	100.0 (3,379)	100.0 (700)	100.0 (198)	100.0 (29)	100.0 (21)	100 (25,562)

Thus, we can say that when income is used to identify the poor, there is the possibility that there are quite a lot of households among the income poor that should not be defined as poor, while among the non-income poor there are a number of households that should have been defined as poor. This suggests that income is not a sufficient indicator to identify as poor those who are living in poverty.

6.3 Adequacy of the poverty line

In the previous section we discussed the negative self-assessment by the income poor. Since the income poor are identified as poor due to the fact that their income is lower than the 2005 official poverty line, we can argue that their negative self-assessment is closely related to their income being lower than the poverty line. Therefore, examining the adequacy of the 2005 poverty line, which acted as a ceiling for the income of the income poor, will be helpful in understanding why the income poor have such a negative self-assessment.

Three methods are used to examine the adequacy of the official poverty line in this section. The first compares the poverty lines of official sectors with those provided by researchers. The second investigates the perception of Korean society regarding the 2005 official poverty line. The third provides other poverty lines, using different methods from the budget standard approach used for the 2005 official poverty line, and compares them with the official poverty line.

6.3.1 Comparison of poverty lines set by official sectors with poverty lines set by researchers

Because there is no recent study presenting an income poverty line, it is not possible to use poverty lines set by researchers to directly examine the adequacy of the 2005 official poverty line. However, as many studies have established an income poverty

line, we can infer the level of the 2005 poverty line by comparing researchers' poverty lines with those of the official sectors established at around the same time.[73] Since the SSC and the KIHASA measured an official sector income poverty line in 1974, 1978, 1988, 1994 and 1999, these five poverty lines are compared with the poverty lines set by researchers.

Table 6.6 below shows the income poverty lines set by official sectors and by researchers. We see that there is a tendency for the former to be set at a lower level than the latter, especially when comparing the 1988 KIHASA income poverty line with the poverty lines set by researchers between 1984 and 1991. Considering that the government's poverty line was based on the official sector income poverty lines in Table 6.6, this implies that the government's income poverty line was not set at an adequate level, but was somewhat low.

Table 6.6 Comparison of official sector's poverty lines with researchers' poverty lines
(5-member household for a month, unit: Korean won/GBP)

Official sector poverty lines			Researchers' poverty lines		
Year	Amount	Official Institute	Year	Amount	Researcher
1974	21,739(11)	SSC	1973	23,165(12)	Seo, Sang-Mok
1978	168,240(84)	SSC			
			1981	145,105(73)	Yun, Suk-Bum
			1984	327,724(164)	Jang, Hyun-Jun
			1987	623,811(312)	Bae, Moo-Gi *et al.*
1988	348,597(174)	KIHASA	1988	406,530(203)	Kwon, Young-Hak
			1989	432,000(216)	Lee, Jung-Woo
			1989	552,172(276)	Park, Tae-Gyu
			1991	720,550(360)	An, Byung-Keun
1994	767,835(384)	KIHASA			
1999	957,641(479)	KIHASA			

6.3.2 Popular evaluation of the 2005 official Korean poverty line

Popular opinion regarding the 2005 official Korean poverty line can be found in statements by non-governmental organisations (NGOs) and various newspaper articles on this matter. After the 2005 poverty line was announced on 1st December 2004, NGOs and newspapers insisted that it had been set too low. One of the most influential NGOs in Korea, the People's Solidarity for Participatory Democracy (PSPD), criticized the government in a statement issued on 1st December 2004 for setting the poverty line at subsistence level, rather than the minimum level for enjoying a healthy and cultural life set as the target by the National Basic Livelihood

[73] As the Korean government did not announce an income poverty line until 2000 (Kim & Son, 2002: Yun, 1995), it is not possible to obtain an official poverty line before 2000. Therefore, this section uses the poverty lines measured by the official sectors as a proxy of the government poverty line.

Security Act. Almost every newspaper insisted that the 2005 poverty line was established at a low level. Kyounghyang daily newspaper, one of the leading papers in Korea, reported that the poverty line was insufficient to secure minimum living conditions,[74] and another leading daily paper, the Hangyoreh, also reported that the poverty line was inadequate.[75] Thus, we can confirm that the NGOs' and newspapers' evaluation of the 2005 poverty line was very negative.

In July 2004 the PSPD and the Beautiful Foundation (a representative foundation in Korea) co-hosted an event 'Living for a month on the poverty line'.[76] The aim of this event was to influence the level of the poverty line that would be announced in December in 2004, by showing that the 2004 government poverty line was inadequate. Therefore, although the event did not directly deal with the adequacy of the 2005 official poverty line, it is worth looking at, partly because it took place in July 2004, just a few months before the announcement of the 2005 poverty line on 1st December 2004, and partly because of the fact that volunteers actually lived for a month on an income equivalent to the official poverty line. A total of 11 volunteers (3 residents and 8 students) participated in this event, which ran from 1st -31st July 2004. They reported that the poverty line was too low, to the extent that they could not avoid living in a house whose roof leaked badly.[77] One of the volunteers stated that she could not even dream of a cultural life.[78] The results of this event indicate that even though the 2005 official poverty line was increased by 8.9% compared with the 2004 official poverty line, it is too low for the poor to lead a typical life in Korean society.

Through the opinions of NGOs, newspapers and the volunteers in the event, we can confirm that, generally speaking, Korean society has a very negative perception of the level of the 2005 official poverty line.

The next section uses other poverty lines derived from the data set employed in

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[74] Page 3, 2nd December 2004
[75] Front page, 2nd December 2004
[76] As the procedure for this event was released to the public on the Internet, it became such a big issue that the Minister of MOHW visited the households where the volunteers lived. Furthermore, a press release distributed by MOHW regarding the poverty line announced on 1st December 2004 (MOHW, 2004a), mentioned the event as follows: "... it has been argued that poverty lines for household size of 1 or 2 are relatively lower than that of a household of size of 4 and the argument is confirmed in the campaign, 'Living for a month on the poverty line'..."
[77] See http://feature.media.daum.net/economic/article592.shtm
[78] See http://feature.media.daum.net/economic/article592.shtm

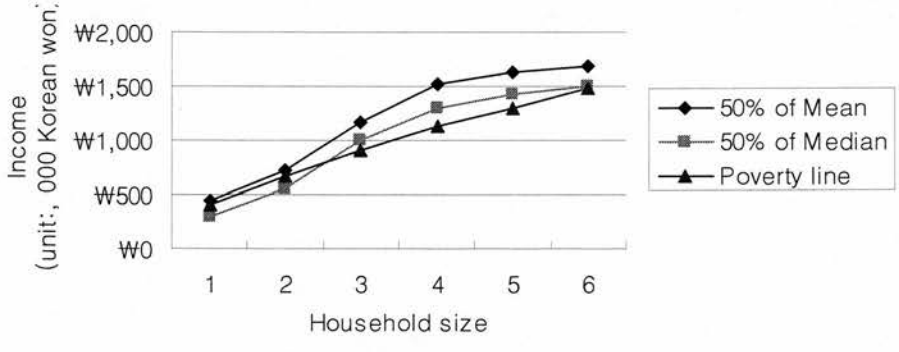
this study to examine the level of the 2005 poverty line. A relative poverty line, which is set at 50% of the mean and the median income of Korean households,[79] and a subjective poverty line are used to examine the adequacy of the official poverty line.

6.3.3 Poverty lines

6.3.3.1 Relative poverty line

Figure 6.2 below illustrates the 2005 official poverty line and relative poverty lines according to household size. It shows that the official poverty line is less than 50% of mean income, regardless of household size; and below 50% of the median income for 3- to 6-member households, but above it for 1- to 2-member households. Thus, in relation to the adequacy of the 2005 poverty line, this comparison suggests that the 2005 poverty line was set at a low level.

Figure 6.2 The 2005 poverty line and relative poverty lines



6.3.3.2 Subjective poverty line

As discussed in Chapter 2, there are several methods of presenting a poverty line using public perception of the minimum income level. They include a subjective poverty line (SPL), which is employed in this study for two reasons: firstly, in Korea the SPL is a widely accepted method of providing a poverty line based on popular opinion; secondly, the other poverty lines, such as the Leyden poverty line (LPL) or CSP-line, are impossible to present using the official data set because there is no

[79] As a relative poverty line, 50% of the mean income or 60% of the median income is likely to be widely used (see Sutherland *et al.*, 2003). Since the purpose of providing a relative poverty line in this section is to examine the level of the official poverty line, this study employs 50% of the median income, which is more rigorous than 60%, together with 50% of the mean income.

adequate question in the national survey questionnaire.

In order to present an SPL, it is essential to ask respondents about the minimum income level that allows them to make ends meet or get along. The official survey used three kinds of questions regarding the minimum level: the first is "What do you think is the minimum income with which your household can make a bare living for a month?"; the second is "What do you think is the minimum income with which your household can get along for a month?": the third is "What do you think is the minimum income with which your household make a healthy and cultural life for a month?". Of these three questions, the second is most commonly used to present a poverty line (see Section 2.1.1.3). In addition to this, the official survey also used the first and the third questions, which give a better indication of the lower or upper levels than the second question. In particular, as the healthy and cultural life indicated by the third question is the level that the 'National Basic Livelihood Security Act' requires the Korean government to secure, the official survey tries to present an SPL for healthy and cultural life.

Using these three questions, three SPLs can be provided by the equation $\ln Y_{min} = \alpha_0 + \alpha_1 \ln Y + \alpha_2 \ln Fs$, where $\ln Y_{min}$ is the logged minimum income given by respondents, $\ln Y$ is logged actual income, $\ln Fs$ is logged family size, α_0 is an intercept, α_1 and α_2 are regression coefficients. When the regression is done using the data set employed by this study, the three kinds of equation are formulated as shown below.[80]

The first one for making a bare living is:

$$\ln Y_{min1} = 4.654 + 0.210 \ln Y + 0.801 \ln Fs \quad (F = 15955.06^{***} \quad Adj.R^2 = .557)$$
$$(234.711) \quad (80.249) \quad (143.072)$$

The second one for getting along is:

$$\ln Y_{min2} = 4.978 + 0.206 \ln Y + 0.773 \ln Fs \quad (F = 16699.43^{***} \quad Adj.R^2 = .568)$$
$$(264.559) \quad (83.220) \quad (145.596)$$

The third one for living a healthy and cultural life is:

[80] For regression, the equivalent income for a 4-member household is used.

$$\ln Y_{min3} = 5.390 + 0.195\ \ln Y + 0.733\ \ln Fs \quad (F = 15465.97^{***} \quad Adj.R^2 = .549)$$
$$(290.992) \quad (80.033) \qquad (140.192)$$

Using these three equations, three kinds of SPLs are established, where ln Y_{min} is equal to lnY according to household size. Table 6.7 below shows the three kinds of SPL according to household size.

Table 6.7 SPLs by household size

(Unit: Korean won, (GBP))

Household size	1	2	3	4	5	6
Bare living	361,817 (181)	730,652 (365)	1,102,184 (551)	1,475,477 (738)	1,850,085 (925)	2,225,746 (1,113)
Get along	528,224 (264)	1,037,258 (519)	1,539,291 (770)	2,036,831 (1,018)	2,531,057 (1,266)	3,022,658 (1,511)
Healthy and cultural life	808,881 (404)	1,520,514 (760)	2,199,540 (1,100)	2,858,222 (1,429)	3,502,178 (1,751)	4,134,637 (2067)
Poverty line	401,466 (201)	668,504 (334)	907,929 (454)	1,136,332 (568)	1,302,918 (651)	1,477,800 (739)

In Table 6.7, it is shown that the subjective poverty line related to a healthy and cultural life is the highest, whilst that related to a bare living is the lowest. These results are reasonable, as income will be increasingly needed to maintain a higher quality of life.

On the other hand, Table 6.7 also shows that, except for the SPL for 'Bare living' for a 1-member household, all SPLs are higher than the poverty line, regardless of household size. In particular, comparison of the three SPLs for a 4-member household and the poverty line for the same size household shows that the SPL for 'Bare living' is 30% higher than the poverty line, while SPLs for 'Get along' and 'Healthy and cultural life' are 80% and 150% higher than the poverty line, respectively. Although SPLs tend to be established at a somewhat higher level than any other poverty line (Gordon, 2000), we can safely infer from these results that the 2005 poverty line was set at a low level equivalent to a bare living or below.

So far, the adequacy of the 2005 official poverty line has been examined using three methods: comparison of official sector poverty lines and researchers' poverty lines, examination of popular opinion regarding the 2005 poverty line, and comparison of the 2005 poverty line and a relative poverty line/subjective poverty line. This investigation allows us to conclude that the poverty line was set at a low

level, to the extent that the income poor only make a bare living or below. Therefore, the low setting of this poverty line can be said to be one of the reasons why the income poor have such a negative self-assessment.

We now explore which variables have an impact on self-assessment by the income poor. As a preliminary to this, the next section examines the relationship between self-assessment by the income poor and the 16 variables.

6.4 Relationship between self-assessment by the income poor and the sixteen variables

6.4.1 Income

Figure 6.3 below shows the mean and the median incomes of the income poor reported in their self-assessments. It can be seen that the two kinds of income fluctuate as self-assessment by the income poor becomes more positive. The patterns of both the mean and the median incomes imply that even if the income of the income poor increases, their self-assessment may not become more positive. Thus, we can infer that the relationship between income and self-assessment by the income poor is very weak.[81] Their correlation coefficient is analysed as 0.126,[82] significant at the level of 0.001.

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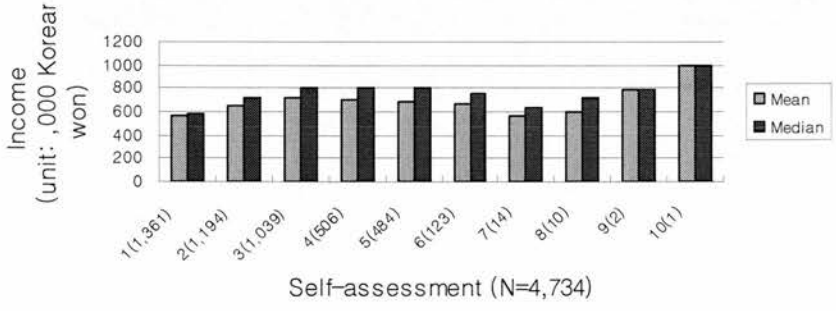
[81] With regard to the interpretation of the income patterns in Figure 6.3, it is useful to remember that the income pattern in self-assessments of 1 to 6 is crucial, whilst the income pattern in self-assessments of 7 to 10 is not so important. The reason for the insignificance of the income pattern between self-assessments of 7 to 10 is that very few (27) households give self-assessments of 7 to 10: of these, 14 gave a self-assessment of 7, 10 gave a self-assessment of 8, 2 gave a self-assessment of 9 and 1 gave a self-assessment of 10. These 27 households only account for 0.6% of income poor households. When two kinds of coefficients are obtained, i.e. a coefficient for income and self-assessment by the income poor with self-assessments of 1 to 6, and a coefficient for income and self-assessment by the income poor with self-assessments of 1 to 10, we will be able to infer that the difference between the two kinds of coefficients is due to the influence of these 27 households. As the former appears to be 0.133 for their raw income and not significant for their logged income, while the latter appears to be 0.126 for their raw income and not significant for their logged income, we can confirm that the difference between the two kinds of coefficients amounts only to 0.07 for raw income. This small difference therefore shows that the influence of households with self-assessments of 7 to 10 is very slight. Thus, when looking at the pattern of income in Figure 6.2, it is better to focus on the income pattern between self-assessments of 1 to 6 rather than that between self-assessments of 1 to 10. This argument can be applied to the interpretation of the relationships between the remaining variables and self-assessment, which are demonstrated in the relevant figures.

[82] The correlation coefficient is calculated by analysing the relationship between the self-assessment and raw income. The coefficient for the self-assessment and log formatted does not appear to be significant. For this reason, raw income will be used for regression analysis, which will be discussed in the next section.

However, although the relationship between income and self-assessment by the income poor is weak, this is no longer the case when their income rises above the 2005 official poverty line. This is because the income poor are no longer income poor when their income is higher than the income poverty line. Thus, the relationship between the income of the income poor and their self-assessment should only be interpreted when their income is below the 2005 official poverty line.

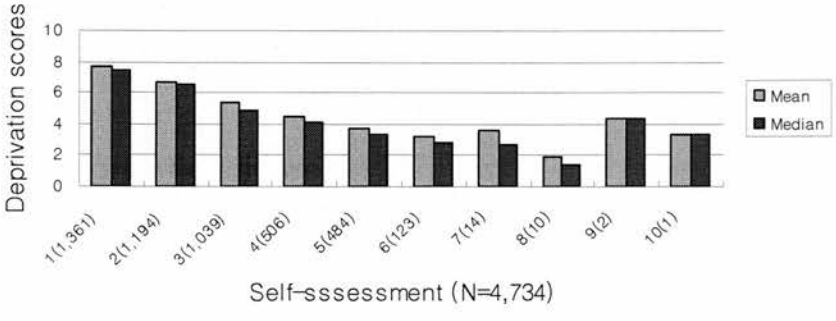
Figure 6.3 Mean and median income recorded in self-assessments



6.4.2 Deprivation scores

Figure 6.4 below demonstrates that both the mean and the median deprivation scores steadily decrease as the income poor assess themselves more positively. This shows that as the deprivation scores of the income poor decrease, their self-assessment becomes accordingly positive. The coefficient between deprivation scores and self-assessment by the income poor appears to be -0.421, significant at the level of 0.001.

Figure 6.4 Mean and median deprivation scores recorded in self-assessments



6.4.3 Resources

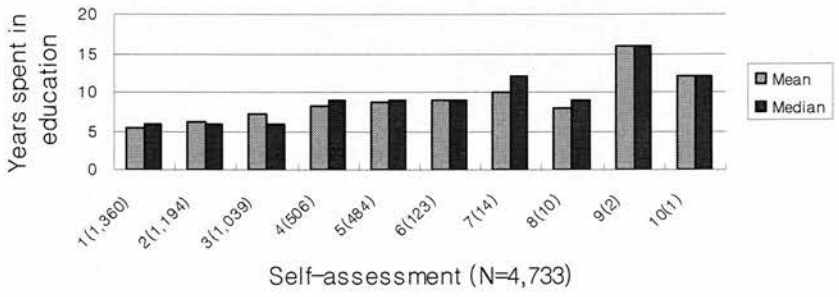
Number of years spent in education by the head of household

Figure 6.5 below shows the mean and the median number of years spent in education

by the head of household, according to self-assessments by the income poor. Through this figure, we see that the relationship between the number of years spent in education and self-assessment is positive. This positive relationship is supported by their correlation coefficient, 0.234, significant at the level of 0.001.

This significant relationship suggests that although the income of the income poor is low enough to fall below the poverty line, when the head of household is more educated, there is a possibility that the household may regard itself as less poor. On the other hand, the mean number of years spent in education by heads of household is generally less than 10 years. As 10 years of education in Korea only means graduation from a middle school, we can infer that a substantial number of the income poor have no opportunity to have a thorough education.

Figure 6.5 Mean and median number of years spent in education by the head of household, as recorded in self-assessments



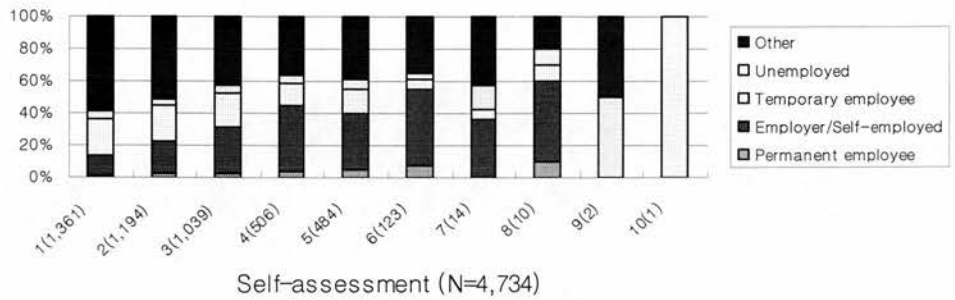
Work status of the head of household

Figure 6.6 below shows how each of the five levels of work status recorded by heads of household is recorded in the self-assessments. It can be seen that as self-assessment becomes more positive, the ratio of 'temporary employee' and 'other' decreases, while the ratio of 'employer or self-employed' and 'permanent employee' increases. This pattern suggests that the head of household's work status is to some extent related to self-assessment. As the value of Cramer's V[83] in showing the relationship between work status and self-assessment appears to 0.139, significant at the level of 0.001, we can say that the work status of the head of household is related

[83] As this study regards the head of household's work status as a nominal variable, Cramer's V is used to examine the relationship between self-assessment and the head of household's work status.

to self-assessment to some degree.

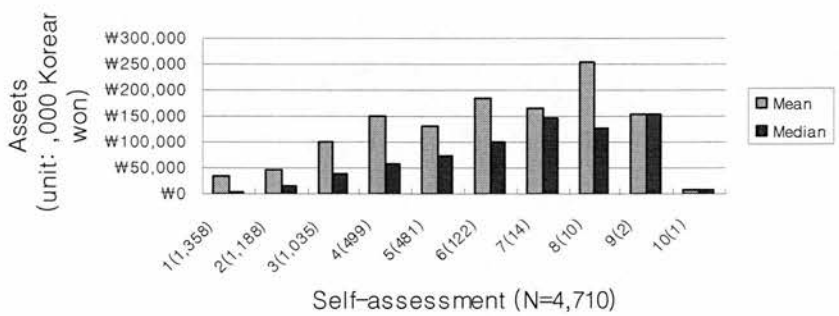
Figure 6.6 Head of household's work status recorded in self-assessments



Assets

Figure 6.7 below provides the mean and the median assets recorded in self-assessments by the income poor. It can be seen that the relationship between assets and self-assessment is positive, since both the mean and the median assets generally increase as self-assessment moves to higher positions. This positive relationship is confirmed by the correlation coefficient for them, which is 0.376,[84] significant at the level of 0.001.

Figure 6.7 Mean and median assets recorded in self-assessments



We can also infer from figure 6.7 that there are big differences in assets among the income poor, since the median assets show wide variations the self-assessments. This suggests that although the income of the income poor stays below the poverty line, the size of their assets varies.

[84] Pearson's r is obtained by analysis of the relationship between the self-assessment and logged assets rather than raw assets. The correlation coefficient of the self-assessment and raw assets is 0.089 (Pearson's r).

In particular, as can be seen in Table 6.8 below, the slight relationship between income and assets shows that low income recorded by the income poor does not refer to low levels of assets, nor does high income refer to high levels of assets. Considering that assets are an important element in summarising someone's economic situation, this implies that a household's economic situation is not represented by income alone.

Table 6.8 Correlation between income and assets

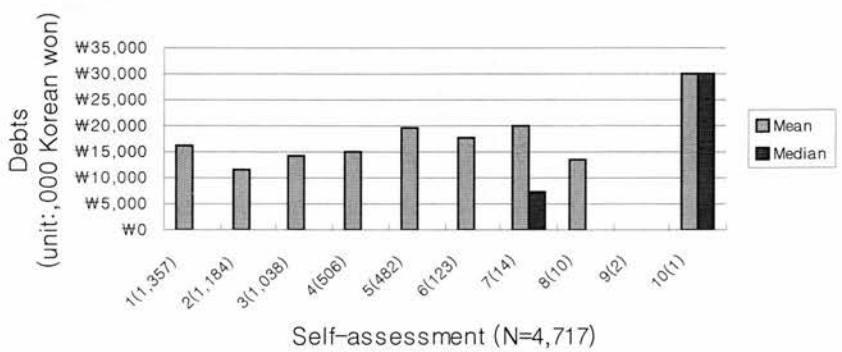
	Raw income	Logged income
Raw assets	0.009	-0.004
Logged assets	0.081***	0.004

*** $p < 0.001$

Debts

Figure 6.8 below shows the mean and the median debts recorded in self-assessments by the income poor. It can be seen from this figure that it is hard to establish a consistent relationship between debts and self-assessment. As their coefficient does not appear to be significant for logged debts or raw debts at the level of 0.001, it can be said that there is no relationship between debts and self-assessment. For this reason, the variable of debts will not be included in relevant regression models in Section 6.5.

Figure 6.8 Mean and median debts recorded in self-assessments



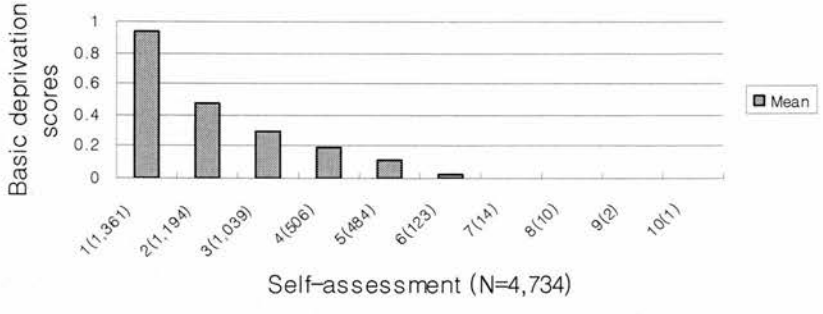
6.4.4 Standard of living

Basic deprivation scores

Figure 6.9 below shows the mean[85] of the basic deprivation scores given in the self-assessments. This clearly demonstrates that the relationship between basic deprivation scores and self-assessment is negative, especially when looking at the mean basic deprivation scores. The correlation coefficient, -0.314, significant at the level of 0.001, gives a consistent result regarding their relationship.

On the other hand, although the median deprivation score of 0 indicates that more than half of respondents are not deprived of any basic items, big differences in the mean deprivation scores between self-assessments of 1 to 6 show that there are significant differences in deprivation of basic necessities among the income poor. This implies that basic deprivation is still a matter to be resolved for the income poor.

Figure 6.9 Mean of basic deprivation scores given in self-assessments

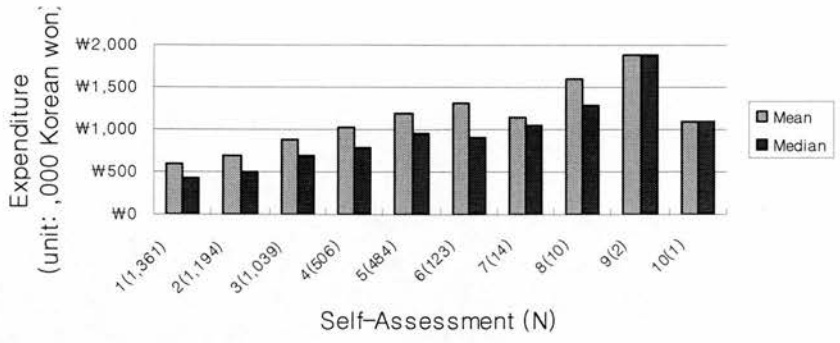


Expenditure

Figure 6.10 below shows the mean and the median expenditure recorded in the self-assessments. It can be seen that self-assessment becomes more positive as the expenditure of the income poor increases, indicating that self-assessment has a positive relationship with expenditure. This positive relationship is supported by their correlation coefficient, which is 0.321,[86] significant at the level of 0.001.

[85] Median of basic deprivation scores appears to be 0 in all stages of self-assessment.
[86] The correlation coefficient is derived from the relationship between the self-assessment and logged expenditure. The correlation coefficient for raw expenditure appears to be 0.285 (Pearson's r).

Figure 6.10 Mean and median household expenditure given in self-assessments

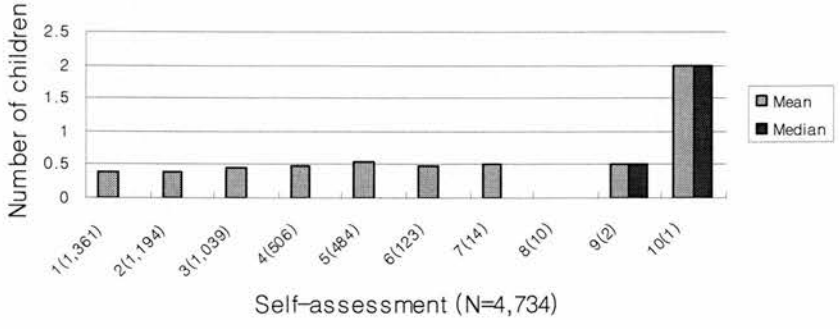


6.4.5 General household matters

Number of children in the household

Figure 6.11 below shows the mean and the median number of children according to self-assessments by the income poor. Since there is little variation in the mean number of children across the self-assessment bands, it can be inferred that there is a weak relationship between the number of children and respondents' self-assessment. This is confirmed by their correlation coefficient, 0.048, significant at the level of 0.001.

Figure 6.11 Mean and median number of children recorded in self-assessments



Gender and age of the head of household, location, marital status of the head of household and lone parents[87]

Table 6.9 below presents the values of Gamma, which show correlations between self-assessment and the variables: head of household's gender and age, location, head

[87] The values of these variables are compared in Table 9.17 (see section 9.3.5), so the diagrams of these five variables are omitted here to avoid repetition.

of household's marital status and lone parents. Apart from the variable of head of household's age, the sub-categories of these variables (shown above in Table 4.4 in Section 4.2.2) are used as ordinal variables for analysis of the correlation. The variable of head of household's age uses the sub-variables in the order: below 30; 30-39; 40-49; 50-64; over 64.

Table 6.9 Correlations between self-assessment and the variables: head of household's gender and age, location, head of household's marital status and lone parents

	Gamma	Number of households in data set
Gender	-0.301 ***	4,734
Head of household's age	-0.088 ***	4,734
Location	0.032	4,732
Head of household's marital status	-0.366 ***	4,733
Lone parents	-0.268 ***	4,734

*** $p < 0.001$

As to the relationship between self-assessment and the gender of the head of income poor households, Table 6.9 shows that the value of Gamma amounts to -0.301, which means that households with a female head give a more negative self-assessment than those with a male head.

The value of Gamma for the head of household's age, -0.088, also indicates that there is a very slight negative relationship between the head of household's age and their self-assessment, which means that households tend to see themselves as very slightly poorer as the head of household becomes older.

Location does not appear to be related to self-assessment. Therefore, the variable of location is not included in relevant regression models.

The variable of marital status of the head of household is analysed as having a negative relationship with self-assessment, since the value of Gamma amounts to -0.366. Considering the composition of sub-variables, in the order: 'married', 'single' and 'separated/divorced/widowed',[88] shows that households where the head is separated/divorced/widowed have a more negative self-perception than households

[88] The order of sub-variables may differ according to the researcher. Accordingly, the value of Gamma can be changed. However, it still seems that the head of household's marital status is related to self-assessment. For example, when the order is changed to 'married', 'separated/divorced/widowed' and 'single', the value of Gamma appears to be -0.265, significant at the level of 0.001.

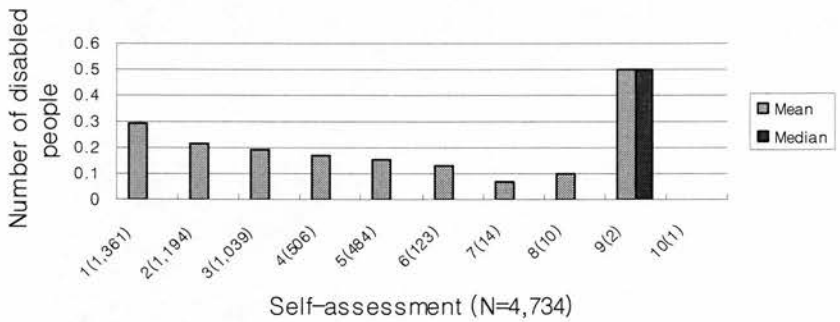
where the head has a different marital status, particularly where he/she is married.

The variable of lone parents is also seen to have a negative relationship with self-assessment, with the value of Gamma amounting to -0.268. This value means that single mothers or single fathers give a more negative self-assessment than other households where the head is not a single mother or father.

Number of disabled people

Figure 6.12 below shows the mean and the median number of disabled people recorded in the self-assessments by the income poor. This pattern shows a negative relationship between the number of disabled people and their self-assessment. Their correlation coefficient, -0.101, significant at the level of 0.001, confirms that this relationship is negative.

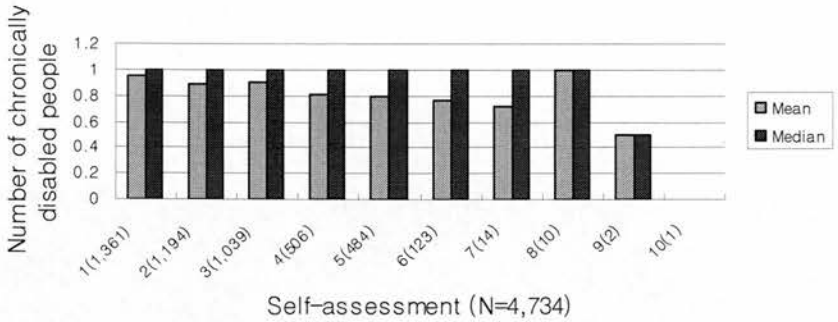
Figure 6.12 Mean and median number of disabled people recorded in self-assessments



Number of chronically ill people

Figure 6.13 below offers the mean and the median number of chronically ill people according to self-assessments by the income poor. Since there is little variation in the mean of the variable across the self-assessment bands, it can be inferred that there is a slight relationship between the number of chronically ill people and self-assessment. Their correlation coefficient, -0.068, significant at the level of 0.001, illustrates that the relationship between them is very weak.

Figure 6.13 Mean and median number of chronically ill people recorded in self-assessments



So far, by investigating the relationship between self-assessment and the 16 variables, we have confirmed which variables are related to self-assessment by the income poor. Thus, we can now say that all but two of these variables – debts and location – are more or less related to self-assessment by the income poor. The next section discusses which of these 14 confirmed variables have an impact on self-assessment, and what the extent of the impact is.

6.5 Impact of variables on self-assessment by the income poor

In Chapter 5, six models were established in order to investigate the influence of certain variables on self-assessment. These six models will also be used here to explore the impact of the 14 confirmed variables on self-assessment by the income poor. The six models consist of five partial models, Model I to Model V, and one full model, Model VI. The five partial models are set up in line with the five categories: income, deprivation, resources, standard of living and general household matters, respectively, while the one full model includes all 14 confirmed variables. The results of the multiple regression of the six models are shown in Table 6.10 below.[89]

[89] Multicollinearity does not appear to be problematic in any of the six models when all the variance inflation variables (VIF) in the models are very low. Except for Models I and II, which use one variable, the highest VIF of Models III to VI appears to be: 1.099 in the variable of assets in Model III; 1.004 in both the variables of basic deprivation scores and expenditure in Model IV; 1.142 in the variable of head of household having single marital status in Model V; and 1.801 in the variable of expenditure in Model VI.

Table 6.10 Multiple regression of the six models in the income poor

Factors/Variables	Model I (ß)	Model II (ß)	Model III (ß)	Model IV (ß)	Model V (ß)	Model VI (ß)
Income	0.126					0.053
Deprivation scores		-0.421				-0.212
Resources						
Years spent in education by the head			0.168			0.125
Work status of the head						
- (Permanent employee)						
- Employer/ self-employed			0.148			0.094
- Temporary status			-			-
- Unemployed			-			-
- Other			-			-
Assets (natural log)			0.309			0.182
Debts			N/A			N/A
Standard of living						
Basic deprivation scores				-0.295		-0.159
Expenditure (natural log)				0.302		0.136
General household matters						
Number of children					-	-
Gender of the head: male					-	-
Age of the head						
- (65+)						
- < 30					0.050	-
- 30-39					-	-0.068
- 40-49					-	-0.084
- 50-64					0.076	-
Location						
- (Big cities)					N/A	N/A
- Medium or small cities					N/A	N/A
- Rural areas					N/A	N/A
Marital status of the head						
- (Married)						
- Single					-0.131	-
- Separated/divorced/ widowed					-0.282	-
Lone parents						
- (Neither single father nor mother)						
- Single mother					-	-
- Single father					-	-
Number of disabled people					-0.109	-0.068
Number of chronically ill people					-0.084	-
Adjusted R^2	0.016	0.177	0.187	0.190	0.101	0.312
F	76.521***	327.653***	362.319***	554.906***	89.449***	214.044***

*** $p < 0.001$. NB. All the standardised regression coefficients in this table are significant at the level of 0.001.

6.5.1 Explanatory power of the models

In Table 6.10, the adjusted R^2s of the six models show the extent to which each model explains self-assessment by the income poor. Among the five partial models, Model II for deprivation scores (adj. $R^2 = 0.177$), Model III for resources (adj. $R^2 = 0.187$) and Model IV for standard of living (adj. $R^2 = 0.190$) explain around 18% of the self-assessments by the income poor.

In contrast, Model V for general household matters (adj. $R^2 = 0.101$) has explanatory powers of 10%, while Model I for income (adj. $R^2 = 0.016$) has powers of 2%. Model VI, the full model, explains 31% of self-assessments by the income poor.

The explanatory powers of these six models offer some meaningful results. Firstly, the explanatory power of Model I for income is so slight that it can be disregarded. As this explanatory power is derived from the income poor, whose income is lower than the poverty line, it is reasonable to expect the explanatory power of income on self-assessment by the income poor to be lower than that of the general population in Korea, which amounts to 17%, as discussed in Section 5.3. However, this power is assessed at just 2%, which is much lower than expected. This means that income explains very little of the self-assessments given by the income poor.

Secondly, although the explanatory power of deprivation seen in Model II is reduced to 0.177 (from the level of 0.326 derived from Model II for the general population of Korea), this power still shows that deprivation does explain self-assessment by the income poor to a certain extent.

Thirdly, Model III for resources and Model IV for standard of living explain around 18% of self-assessment by the income poor, while Model V for general household matters explains 10% of self-assessment by the income poor. This shows that the variables related to resources or standard of living play almost twice the role in explaining self-assessment by the income poor than variables associated with general household matters.

Fourthly, Model VI explains 31% of self-assessment by the income poor. This is 11% less than the 42% explanatory power for this model in relation to the general population of Korea. The main reason for this reduction is because the effect of

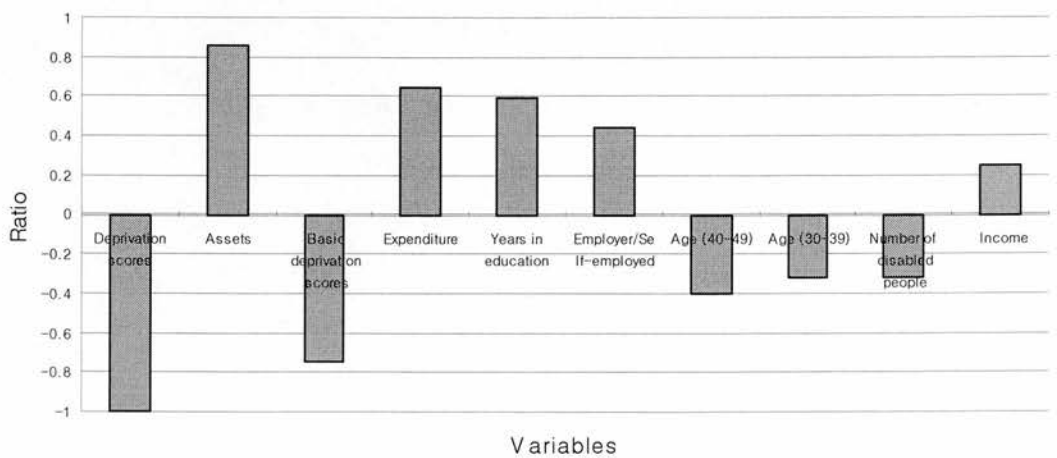
income on self-assessment has been considered in identification of the income poor.

6.5.2 Impact of each variable on self-assessment

Table 6.10 above also shows the standardised coefficients of the six models. Of these, this study primarily focuses on interpretation of the coefficients in Model VI, since they are obtained from the full variables.

The coefficients of Model VI reveal that self-assessment by the income poor has a positive relationship with the following variables: assets (β= 0.182), expenditure (β= 0.136), number of years spent in education by the head of household (β= 0.125), head of household's work status as employer or self-employed (β= 0.094), income (β= 0.053). It can also be seen that self-assessment by the income poor has a negative relationship with these variables: deprivation scores (β= -0.212), basic deprivation scores (β= -0.159), head of household aged between 40-49 (β= -0.084), head of household aged between 30-39 (β= -0.068), number of disabled (β= -0.068). Among these variables, the variables head of household aged between 30-39 and between 40-49 do not appear to be significant in the partial model V. This shows that these variables should be interpreted as having little impact on self-assessment by the income poor.

Figure 6.14 Ratio of the value of deprivation scores to that of other variables



NB. The ratio of the variables is calculated against the value of deprivation scores, which is set at -1.

In order to compare the relative extent of the impact of these variables, Figure 6.14 above is generated by transforming the standardised regression coefficients of Model VI into a ratio where the coefficient of the variable of deprivation score is set at -1. Compared with the degree of impact of the variable of deprivation score, the impact of the remaining variables appears to be: assets (86%), basic deprivation scores (75%), expenditure (64%), number of years spent in education by the head of household (59%) and head of household's work status as employer or self-employed (44%). The impact of the other variables remains at around 30%. In terms of the extent of relative impact, income appears to stay at 25% against the variable of deprivation.

Some of the findings derived from these results are worth discussing in relation to poverty policies. First, the finding that the impact of income on self-assessment almost disappears. This shows that an increase in their income does not have an influential impact on the self-assessment by the income poor. Considering that this finding is derived from the income poor, whose income level is below the poverty line, this means that poverty policies that aim to maintain household income at the current poverty line do not contribute to improving self-assessment by the income poor.

Second, deprivation scores appear to be the variable with the greatest impact on self-assessment by the income poor. The extent of their impact shows that the removal of deprivation would be effective in improving self-assessment by the income poor.

Third, the analysis shows that in order to improve self-assessment by the income poor, policies need to focus on improving assets, basic deprivation scores, expenditure, education and occupation. In particular, the significant impact of basic deprivation scores suggests that deprivation of the most essential necessities such as food, electricity, water and heating is still a problem that needs to be resolved among the income poor. This shows that immediate action needs to be taken to deal with basic deprivation when the poor are identified as income poor.

6.6 Conclusion

Chapter 6 has discussed self-assessment of their situation by the income poor. This involved identifying the income poor using the 2005 official poverty line, which revealed that 18.5% of all Korean households could be classified as income poor. This is a much larger percentage than the 5% of people receiving social assistance, suggesting that more people should be getting this benefit than is the case at present.

After identifying the income poor, the investigation into their self-assessment considered how they assess their situation on a 10-point scale. It was seen that their self-assessment is quite negative, especially compared with that of the general Korean population. This means that income has a certain function in distinguishing households with a negative self-assessment from households with positive self-assessment.

However, it does not mean that income is a sufficient indicator to identify those who are living in poverty as poor. Firstly, it appeared that 24% of the income poor do not see their situation as poor. Considering that their income should be less than the income poverty line, which was set at a low level, this figure of 24% indicates that although their income is low, there may be a lot of the income poor who are not living in real poverty. Furthermore, it was found that 65% of those who assessed themselves as poor are not identified as the income poor. This means that there may be a lot of households living in real poverty who are not identified as income poor because their income is higher than the poverty line. This allows us to infer that income alone is not a sufficient indicator in identifying those experiencing poverty as poor.

Because the low level set for the poverty line is thought to be one of the reasons for the negative self-assessment by the income poor, this study examined the adequacy of the 2005 poverty line. This was done in various ways. Comparison of the official sector poverty lines with the poverty lines set by researchers showed that the government's income poverty line had been set at a rather low level. In fact, the 'Living for a month on the poverty line' event provided empirical evidence that the 2004 official poverty line was set at such a low level that the poor could not lead a typical life at all. Statements by NGOs and newspaper articles indicated that the 2005 poverty line had also been set at a low level, equivalent to only a bare living or less.

This was confirmed by comparing the 2005 poverty line with other poverty lines, such as a relative poverty line and subjective poverty lines generated by this study using the official data set. Thus, we could say that setting the poverty line at a low level is one of the causes of negative self-assessment by the income poor.

In order to investigate the factors that have an impact on self-assessment by the income poor, we investigated the relationships between 16 variables and self-assessment by the income poor, and the extent to which each variable influences their self-assessment. As a result, 14 of the 16 variables were confirmed as having a significant relationship with self-assessment by the income poor. Regression of the six models on the14 confirmed variables showed that firstly, income has little impact on self-assessment by the income poor. In contrast, deprivation scores appeared to have the greatest impact on self-assessment. This suggests that poverty policies focusing on deprivation scores rather than income would be more effective in improving self-assessment by the income poor. Secondly, the variables of assets, basic deprivation scores, expenditure and number of years spent in education by the head of household were shown to have a significant impact on self-assessment. This means that introducing comprehensive policies covering these variables would be effective in improving self-assessment by the income poor. In particular, as the significant impact of basic deprivation scores on self-assessment implies that deprivation of the most basic items is a problem for the income poor, it has been suggested that policies dealing with basic deprivation need to be introduced as a matter of urgency.

CHAPTER 7. SELF-ASSESSMENT BY THE DEPRIVATION POOR

Chapter 7 explores self-assessment of their situation by the deprivation poor. When considering that interest in Korea has traditionally focused on issues related to the income poor, this chapter is of especial significance in that it is the first investigation into issues regarding the deprivation poor, who have never been discussed in Korea. As a result, it is expected to give some new perspectives to both poverty policies and poverty research in Korea.

In order to explore self-assessment by the deprivation poor, this chapter is organised as follows. Section 7.1 identifies the deprivation poor using the number of income poor, as discussed in Chapter 3. Section 7.2 investigates how the deprivation poor assess their situation. Section 7.3 deals with the severity of their living conditions, which is thought to be related to their self-assessment. Section 7.4 examines the relationship between self-assessment by the deprivation poor and the 16 variables established to explore what has an impact on people's self-assessment. Section 7.5 explores which variables have an impact on self-assessment and the extent of this impact. Section 7.6 presents the conclusions of this chapter.

7.1 Identification of the deprivation poor

Chapter 3 discussed how the number of deprivation poor would be set at the number of the income poor. This was due on the one hand to the practical need to identify the deprivation poor, and on the other hand to the purpose of this study in comparing self-assessment by the poor in terms of income and/or deprivation. As the number of income poor was assessed as 18.5% of all Korean households (see Section 6.1 for details), this meant that the number of deprivation poor would also be set at 18.5%.

Although the number of deprivation poor is fixed at 18.5%, this does not mean that the percentage will automatically identify the deprivation poor, since the percentage itself does not give any information about who the deprivation poor are. In order to identify the deprivation poor, it is necessary to seek information on the degree of deprivation in Korean households. This will enable us to rank Korean households according to their degree of deprivation, and thus establish a critical degree of deprivation that defines the deprivation poor at 18.5%.

As this study employs deprivation scores to measure the degree of deprivation in households (as discussed in Section 3.3.2), we need to set up a critical deprivation score or deprivation poverty line that will set the number of deprivation poor at 18.5%. The results of the analysis established the deprivation poverty line at a deprivation score of 5.708, which means that households with a score of 5.708 or more are defined as the deprivation poor (see Table 7.1 below).[90]

Table 7.1 Number of deprivation poor

	Deprivation poor	Non-deprivation poor	Total
% (Number of households in data set)	18.5 (4,732)	81.5 (20,830)	100 (25,562)
Deprivation scores	5.708 or more	5.707 or less	

When 18.5% is transformed into the actual number of deprivation poor among the overall population, the number of deprivation poor households is estimated to be 2,874,667,[91] and the number of deprivation poor individuals is calculated to be 7,042,934.[92]

7.2 Description of self-assessment by the deprivation poor

Table 7.2 below shows the number of deprivation poor in each self-assessment band on the 10-point scale. The percentages of the deprivation poor decrease steadily from 30.2% giving a self-assessment of 1 to 1.3% giving a self-assessment of 6, and stay at around 0% beyond a self-assessment of 6. This pattern shows that self-perception among the deprivation poor is quite negative.

Table 7.2 Distribution of the deprivation poor derived from self-assessment

Self-assessment	1	2	3	4	5	6	7	8	9	10	Total[93]
%	**30.2**	**29.0**	**22.1**	10.1	7.0	1.3	0.2	0.0	0.0	0.0	99.9
(Number of households in data set)	(1,430)	(1,373)	(1,043)	(478)	(331)	(61)	(11)	(2)	(1)	(2)	(4,732)
Cumulative percentage	**30.2**	**59.2**	**81.3**	91.4	98.4	99.7	99.9	99.9	99.9	99.9	99.9

[90] There were 4,732 deprivation poor households in the data set, two less than the number of income poor households (4,734). The reason for using the number 4,732 is that this is the closest figure to the number of income poor households (4,734). The second closest number is 4,737 when a score of 5.707 is taken.

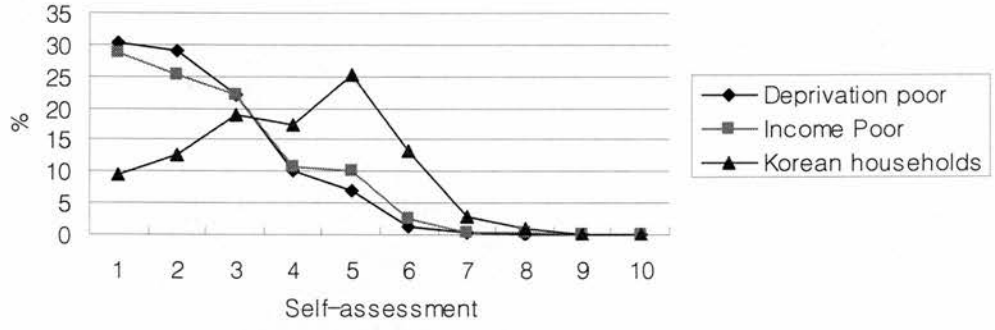
[91] This is calculated by finding 18.5% of the total number of households (15,538,741).

[92] This is obtained by multiplying the number of deprivation poor households by the average number of members of deprivation poor households (2.45), which is derived from analysis of the data set used in this study.

[93] It does not amount to 100 due to rounding.

This negative self-assessment by the deprivation poor is particularly evident when it is compared with self-assessments by Korean households in general and with those of the income poor. Figure 7.1 below shows the percentage of households placed in each self-assessment band by these three groups. In this figure, it can be seen that the self-assessment by the deprivation poor is rather more negative than that of Korean households in general, and slightly more negative than that of the income poor, especially when comparing the percentage of those giving a self-assessment of 2. This shows that the deprivation poor see themselves more negatively than the income poor, meaning that deprivation scores function better than income in distinguishing households with a negative self-assessment from households without a negative self-assessment.

Figure 7.1 Percentages of deprivation poor and income poor derived from self-assessments



However, although deprivation scores function better than income, Table 7.2 shows that the role of deprivation scores may not be sufficient. It can be seen that 81% of the deprivation poor see themselves as poor when self-assessments of 1 to 3 are interpreted as referring to a poor position. This means that 19% of them do not think of themselves as poor. We therefore can say that within the deprivation poor, the figure of 19% shows the extent of the discrepancy between an objective poverty status determined by deprivation and a subjective poverty status determined by people's opinion. Given that the deprivation poor live in fairly deprived conditions (see Section 7.3 for details), this should not be regarded as a slight discrepancy. This shows that the subjective perception of poverty is quite different from the objective poverty status determined by deprivation. When considering that people know their situation best, this suggests the possibility that there are a lot of households among

the deprivation poor that are not poor.

On the other hand, looking at Table 7.3 below, which shows the distribution of both the deprivation poor and the non-deprivation poor in each self-assessment band, we can see that there are big inconsistencies in the way that people assess their own situation and the assessment of their situation made using deprivation scores. Thus, 40% of households giving a self-assessment of 1, which refers to a very poor position, are not identified as the deprivation poor; 57% of households giving a self-assessment of 2, referring to a fairly poor position, do not appear to belong to the deprivation poor; and 78% of households giving a self-assessment of 3, seeing themselves as slightly poor, are not regarded as the deprivation poor. These big inconsistencies show the possibility that a number of households that should be identified as poor may not be identified as such when deprivation scores are used to identify the poor.

Table 7.3 Self-assessment by the deprivation poor and the non-deprivation poor

Self-assessment	1	2	3	4	5	6	7	8	9	10	Total
Deprivation Poor	**59.6**	**42.9**	**21.7**	10.8	5.2	1.8	1.6	1.0	3.4	9.5	18.5
	(1,430)	(1,373)	(1,043)	(478)	(331)	(61)	(11)	(2)	(1)	(2)	(4,732)
Non-deprivation	**40.4**	**57.1**	**78.3**	89.2	94.8	98.2	98.4	99.0	96.6	90.5	81.5
poor	(970)	(1,826)	(3,767)	(3,943)	(6,074)	(3,318)	(689)	(196)	(28)	(19)	(20,830)
Total	**100.0**	**100.0**	**100.0**	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	(2,400)	**(3,199)**	**(4,810)**	(4,421)	(6,405)	(3,379)	(700)	(198)	(29)	(21)	(25,562)

Thus, we can say that when deprivation is used to identify the poor, there is the possibility that those identified as deprivation poor will include numerous households that should not be defined as poor, while those classified as non-deprivation poor will include a number of households that should have been defined as poor. This suggests that deprivation is not a sufficient indicator to identify those living in real poverty as poor, although deprivation might be a better indicator than income in identifying those living in real poverty as poor.

7.3 Extent of deprivation among the deprivation poor

This section examines the severity of deprivation experienced by the deprivation poor. Since the deprivation poor are defined as poor in terms of deprivation, we can expect their negative self-assessment to be related to the extent of their deprivation. Therefore, when their deprivation is proved to be severe, we will be able to say that

the severely deprived condition of the deprivation poor is one of the factors forming their negative self-assessment.

In Section 7.1 we established the deprivation poverty line at a deprivation score of 5.708. As deprivation scores are derived from the 25 deprivation items (see Section 3.3.2.2.1), the score of 5.708 as a deprivation poverty line means that the deprivation poor live without at least 5 of the 25 deprivation items. The lack of at least 5 necessities allows us to imagine that they must be living in tough situations. However, while we can try to imagine what their life is like, it is hard to picture how tough their living conditions really are as we are unused to linking the idea of life without 5 necessities to actual living conditions.

For this reason, this study uses two methods to explore how tough life really is for the deprivation poor. Firstly, it compares the average deprivation scores of the deprivation poor to those of both the income poor and Korean households in general. Since this comparison will show how much more deprived the deprivation poor are than the other two groups, in this regard, it can be said to be a method that explores the living conditions of the deprivation poor in terms of quantity. Secondly, it uses the deprivation items to compare the extent of deprivation between the deprivation poor and the income poor/ Korean households in general. Unlike the first method, the second one explores the extent of deprivation in terms of quality.

7.3.1 Deprivation scores of the deprivation poor

As the first attempt to capture the living conditions of the deprivation poor, this study compares the mean deprivation scores of the following three groups: the deprivation poor, the income poor and Korean households in general.

Table 7.4 Mean deprivation scores of the deprivation poor, the income poor and Korean households in general

	Deprivation poor	Income poor	Korean households
Mean deprivation scores	8.2	6.0	3.0
(Number of households in data set)	(4,732)	(4,734)	(25,562)

Table 7.4 above shows the mean deprivation scores of the three groups, indicating that the deprivation poor have an average deprivation score of 8.2, the income poor an average score of 6.0 and Korean households in general an average

score of 3.0. These deprivation scores mean that, on average, the deprivation poor live without at least 8 of the 25 items, the income poor live without at least 6 items and Korean households in general without at least 3 items. Comparing the deprivation score of the deprivation poor with that of the income poor and Korean households in general, we can see that the deprivation poor suffer 2.7 times more deprivation than Korean households in general, and 1.3 times more than the income poor. That the deprivation poor suffer 2.7 times the deprivation experienced by Korean households in general demonstrates that the deprivation poor do not lead a typical life at all, but suffer severe deprivation. Furthermore, the result that the deprivation poor experience 1.3 times the deprivation undergone by the income poor shows that the deprivation poor live in tough situations, especially considering that the average standard of living for the income poor would not be high, since their income level falls below the official poverty line, which is set at a low level. Thus, we can conclude that the living conditions of the deprivation poor are fairly harsh.

7.3.2 Extent of deprivation according to deprivation items

Although it has been confirmed that the deprivation poor experience fairly difficult living conditions, we need to look at which items the deprivation poor lack more than the other two groups, as this can show their deprivation in terms of quality.

Firstly, Table 7.5 below is presented to compare the deprivation poor with Korean households in general. This table shows the extent of deprivation in both groups according to each item. The 'Ranking' column on the left shows the order in which Korean households rank each item, with smallest number (1) indicating the item seen as the most necessary and the largest number (25) indicating the item seen as least necessary (see Section 3.3.2.2.1). Column (A) shows the percentage of deprivation poor that are deprived of each item, while column (B) shows the percentage of Korean households deprived of each item. Column (A/B) is calculated by dividing the figure in column (A) by the figure in column (B), thus indicating how many times more the deprivation poor experience deprivation than Korean households in general. The 'Total' figure at the bottom of each column shows the average of each column. The deprivation items in the table are arranged in order of the highest number in column (A/B) to the lowest.

Table 7.5 Extent of deprivation among the deprivation poor and Korean households in general

Ranking		% don't have/can't afford (Deprivation poor) (A)	% don't have/can't afford (Korean households) (B)	Ratio (A/B)
1	Refrigerator	1.8	0.4	4.5
8	At least one pair of shoes (adults only)	36.6	8.2	4.5
4	Treatment in hospital when necessary	21.2	5.0	4.2
3	Heating using gas or paraffin, or central heating	9.0	2.2	4.1
16	Mobile phone	21.2	5.2	4.1
10	At least one best outfit for special occasions (adults only)	47.2	11.6	4.1
5	Washing machine	16.9	4.3	3.9
9	At least two warm coats (all members)	41.8	10.9	3.8
13	Meat or fish every week	64.6	17.2	3.8
12	Fresh fruit every week	71.0	19.9	3.6
2	Dental treatment in a dental clinic	36.3	10.2	3.6
21	Microwave	37.1	11.4	3.3
25	VCR or DVD player	35.5	11.7	3.0
17	Personal computer	29.9	9.9	3.0
18	Eating out at least twice a year with family	68.5	23.2	3.0
6	Number of bedrooms appropriate to the needs of the household	7.9	2.8	2.8
19	Internet	33.3	11.9	2.8
14	Private insurances on top of social insurance	71.0	28.2	2.5
15	Savings or individual pension for old age	76.0	31.8	2.4
20	Car	37.1	16.2	2.3
7	Access to public transport within 10-minute walk	8.2	3.7	2.2
23	Taking oriental tonics or medicine to promote a nutritious diet and health	80.1	36.9	2.2
22	Holidays away from home once a year	84.2	43.4	1.9
11	Savings for a rainy day	86.5	48.2	1.8
24	Hobby or leisure activity	81.5	50.6	1.6
Total		44.2	17.0	2.6

In Table 7.5, column (A/B) shows which items the deprivation poor lack more than Korean households in general. This column shows that the deprivation poor are 1.6 to 4.5 times more deprived than Korean households in general, depending on the item. Thus, the deprivation poor are 4 times more deprived than the general population with regard to 6 items, 3 times more deprived with regard to 9 items, and twice as deprived with regard to 7 items. This shows that in terms of deprivation items, there are quite big differences in the extent of deprivation between the deprivation poor and Korean households in general.

The feature of the differences according to the deprivation items can be

captured when looking at the 'Ranking' and 'A/B' columns in Table 7.5. When these two columns are compared, it can be seen that as the numbers in column A/B get bigger, the numbers in the Ranking column tend to become smaller. This means that the deprivation poor are relatively more deprived of items that Korean households regard as most necessary. This is supported by the correlation coefficient for the two columns, which amounts to -0.606 (Pearson's r), significant at the level of 0.001. The coefficient shows that the two columns have quite a strong negative relationship. That is, the more an item is seen as a basic necessity, the more deprived of it the deprivation poor are than Korean households in general. Thus, it can safely be said that the deprivation poor are more deprived of essential items than Korean households in general.

Table 7.6 Extent of deprivation experienced by the deprivation poor and the income poor

Ranking		% don't have/can't afford (Deprivation poor) (A)	% don't have/can't afford (Income poor) (B)	Ratio (A/B)
17	Personal computer	29.9	15.8	1.9
4	Treatment in hospital when necessary	21.2	11.4	1.9
19	Internet	33.3	18.3	1.8
6	Number of bedrooms appropriate to the needs of the household	7.9	4.4	1.8
25	VCR or DVD player	35.5	21.3	1.7
2	Dental treatment in a dental clinic	36.3	22.1	1.6
20	Car	37.1	23	1.6
10	At least one best outfit for special occasions (adults only)	47.2	29.5	1.6
9	At least two warm coats (all members)	41.8	26.7	1.6
8	At least one pair of shoes (adults only)	36.6	23.6	1.6
1	Refrigerator	1.8	1.2	1.5
21	Microwave	37.1	25	1.5
13	Meat or fish every week	64.6	44.9	1.4
12	Fresh fruit every week	71	51.3	1.4
18	Eating out at least twice a year with family	68.5	50	1.4
5	Washing machine	16.9	13.1	1.3
23	Taking oriental tonics or medicine to promote a nutritious diet and health	80.1	62.6	1.3
22	Holidays away from home once a year	84.2	66.7	1.3
24	Hobby or leisure activity	81.5	64.7	1.3
16	Mobile phone	21.2	17	1.2
14	Private insurances on top of social insurance	71	59	1.2
3	Heating using gas or paraffin, or central heating	9	7.5	1.2
11	Savings for rainy days	86.5	77	1.1
7	Access to public transport within 10-minute walk	8.2	7.3	1.1
15	Savings or individual pension for old age	76	69.1	1.1
Total		44.2	32.5	1.4

Table 7.6 above allows us to compare the extent of deprivation between the deprivation poor and the income poor in terms of deprivation items. This table was generated in the same way as Table 7.5. Here, column (A/B) shows that the deprivation poor suffer 1.1 to 1.9 times more deprivation than the income poor in terms of deprivation items. This allows us to infer that although the deprivation poor are generally more deprived than the income poor, the differences in deprivation according to these items are small. This can be ascertained by comparing the 'Ranking' and '(A/B)' columns, which show that the deprivation poor are not more deprived of essential items than the income poor, as it is hard to find a consistent pattern between numbers in the two columns. This is supported by the correlation coefficient for the two columns, which amounts to 0.048, significant at the level of 0.001. Thus, we can say that the deprivation poor are not more severely deprived of basic items than the income poor. However, as discussed in Section 7.3.1, this does not mean that the deprivation poor are not more deprived than the income poor.

Thus, with regard to the living conditions of the deprivation poor, we can conclude that although the deprivation poor are not more deprived of basic deprivation items than the income poor, they are trapped in very harsh living conditions. Their severely deprived condition explains why the deprivation poor have quite a negative self-assessment.

From the next section, we explore which variables have an effect on self-assessment by the deprivation poor, starting with an investigation into the relationship between self-assessment by the deprivation poor and the 16 variables, as a preliminary to exploring which variables have an impact on self-assessment.

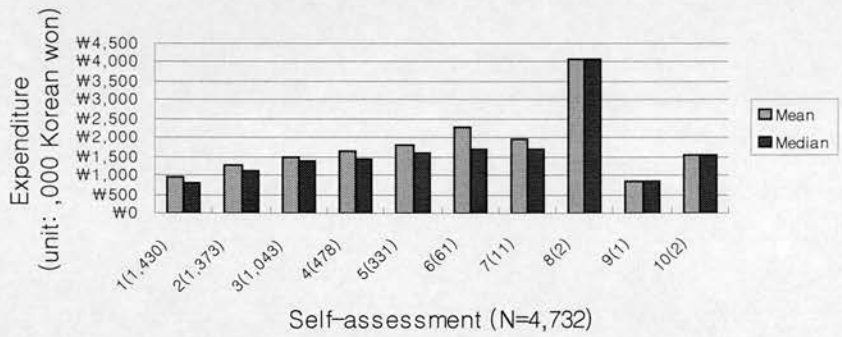
7.4 Relationship between self-assessment by the deprivation poor and the sixteen variables

7.4.1 Income

Figure 7.2 below shows the mean and the median incomes of the deprivation poor given in their self-assessments. These show that the relationship between the two kinds of income and self-assessment is positive, although the pattern in self-

assessments of 7 to 10 is not consistent with that in self-assessments of 1 to 6.[94] Their correlation coefficient of 0.238,[95] significant at the level of 0.001, supports the finding that income has a positive relationship with self-assessment by the deprivation poor. Thus, we can infer that self-assessment by the deprivation poor becomes more positive as their income increases.

Figure 7.2 Mean and median income given in self-assessments



7.4.2 Deprivation scores

Figure 7.3 below shows that deprivation scores have a slightly negative relationship with self-assessment by the deprivation poor, since both the mean and the median deprivation scores decrease slightly as self-assessment becomes more positive. Their coefficient appears to be -0.197, significant at the level of 0.001. Comparing this coefficient to those of the income poor (-0.421) or Korean households (-0.571) shows that it is reduced by a considerable extent. This reduction is to be expected since the coefficient is based on the deprivation poor, and the influence of deprivation scores is already considered when the deprivation poor are identified.

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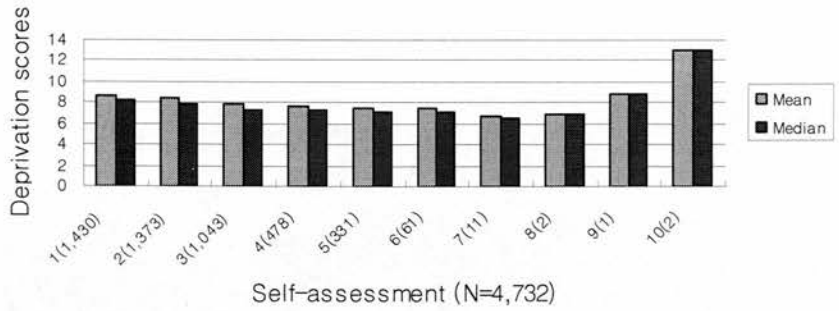
[94] Although the household income patterns in self-assessments of 7 to10 are fairly different from those in self-assessments of 1 to 6, the influence of the former on the relationship between income of the deprivation poor and their self-assessment would be slight, since only a small number of households gave self-assessments of 7 to10 – just 16: 11 of which gave self-assessments of 7, 2 gave self-assessments of 8, 1 gave a self-assessment of 9, and 2 gave self-assessments of 10, as seen in Table 7.5. These 16 households only account for 0.3% of deprivation poor households. Thus, it would be useful to remember this point in the interpretation of the relationships between self-assessment and the remaining variables, especially in the relevant figures.

[95] The correlation coefficient is calculated by analysis of the relationship between self-assessment and raw income. The coefficient for self-assessment and their log formatted income appears to be 0.238 as well. Thus, their raw income will be used for regression.

Figure 7.3 Mean and median income of deprivation scores shown in self-assessments

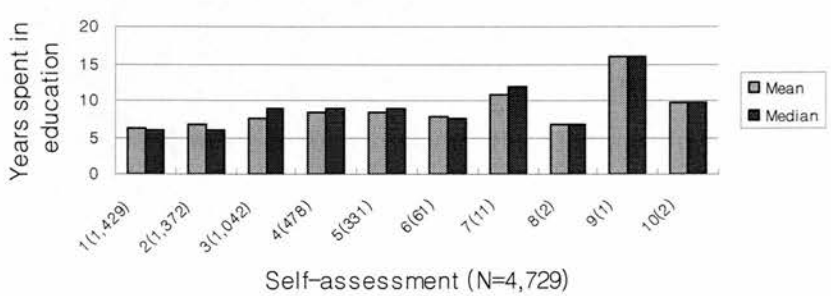


7.4.3 Resources

Number of years spent in education by the head of household

Figure 7.4 below shows the mean and the median number of years spent in education by the head of deprivation poor households in each self-assessment band. The pattern of the mean and the median shows that the relationship between the number of years spent in education and self-assessment is positive. This positive relationship is supported by their correlation coefficient, 0.166, significant at the level of 0.001, which shows that the relationship is not strong. It can be seen that, like the income poor, the deprivation poor do not have the opportunity to get enough education, since the mean number of years spent in education generally stays below 10.

Figure 7.4 Mean and median number of years spent in education by the head of household as shown in self-assessments

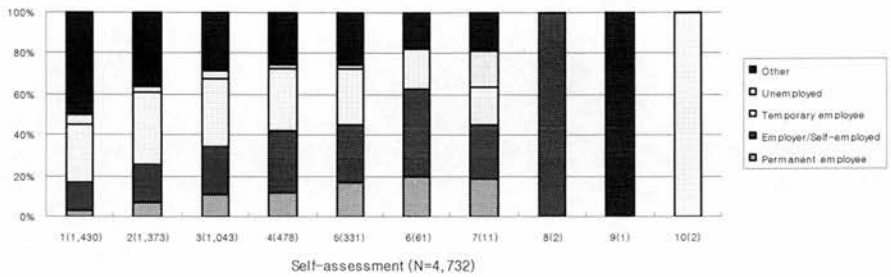


Work status of the head of household

Figure 7.5 below shows the ratio of all five types of work status given by the heads of household in their self-assessment. It can be seen that as self-assessment becomes more positive, the ratio of 'temporary employee' and 'other' decreases, while the ratio of 'employer or self-employed' and 'permanent employee' increases. This pattern suggests that there is some relationship between the head of household's

work status and their self-assessment, a finding that is confirmed using the value of Cramer's V,[96] 0.139, significant at the level of 0.001.

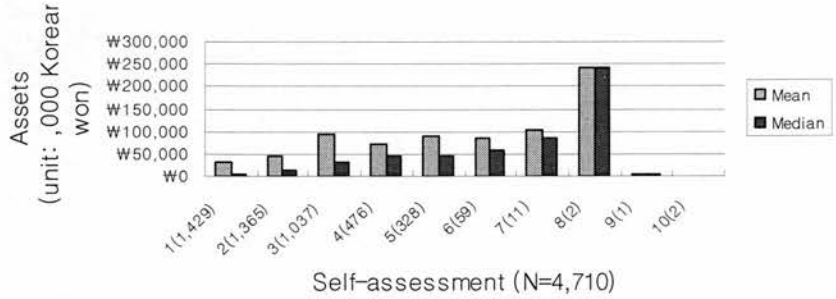
Figure 7.5 Head of household's work status as shown in self-assessments



Assets

Figure 7.6 below shows the mean and the median assets of the deprivation poor according to their self-assessments. The relationship between both kinds of assets and self-assessment are seen to be positive, since both increase as self-assessment becomes positive. This positive relationship is confirmed by their correlation coefficient, which amounts to 0.294,[97] significant at the level of 0.001. The coefficient shows that assets have a relatively strong relationship with self-assessment by the deprivation poor.

Figure 7.6 Mean and median assets reported in self-assessments



Debts

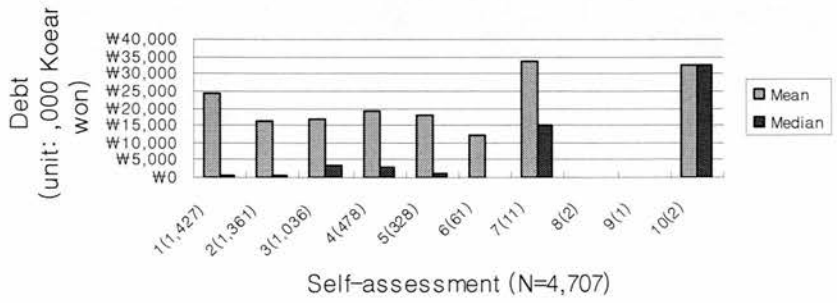
Figure 7.7 below shows the mean and the median debts among the deprivation poor as recorded in their self-assessments. It is hard to discern a consistent relationship

[96] As this study regards the head of household's work status as a nominal variable, Cramer's V is used to examine the relationship between self-assessment and the head of household's work status.

[97] Pearson's r is obtained by analysis of the relationship between the self-assessment and logged assets rather than raw assets. The correlation coefficient of the self-assessment and raw assets is 0.213. It therefore means that the logged assets will be used in relevant regression models.

between debts and self-assessment, and as their coefficient does not appear to be significant for logged debts or for raw debts, at the level of 0.001, it can be said that the relationship between debts and self-assessment is so weak that it can be disregarded. For this reason, the variable of debts will not be included in regression models in Section 7.5.

Figure 7.7 Mean and median debts recorded in self-assessments

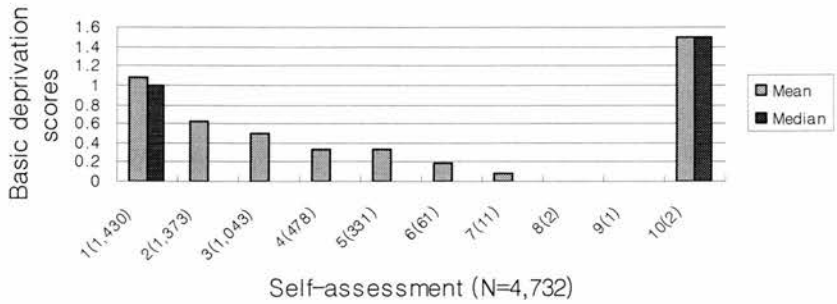


7.4.4 Standard of living

Basic deprivation scores

Figure 7.8 below shows the mean and the median basic deprivation scores derived from self-assessments by the deprivation poor. The pattern of mean scores reveals a relatively strong negative relationship between basic deprivation scores and self-assessment. This is ascertained by the correlation coefficient for them, which appears to be -0.252, significant at the level of 0.001.

Figure 7.8 Mean and median basic deprivation scores given in self-assessments

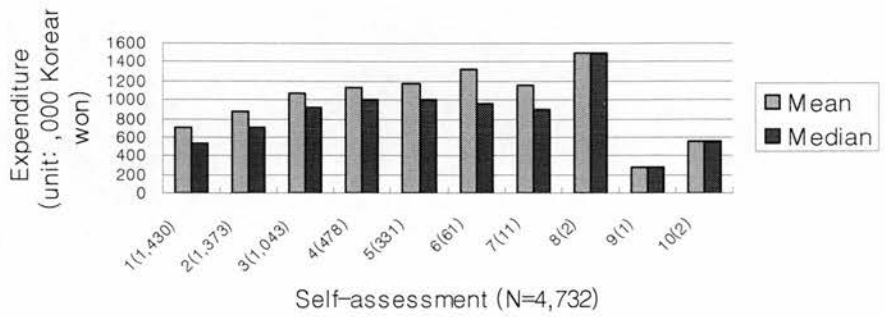


Expenditure

Figure 7.9 below shows the mean and the median expenditure by the deprivation poor in their self-assessments. Since this shows a tendency for the deprivation poor to assess themselves more positively as their expenditure increases, it can be said that

expenditure has a positive relationship with self-assessment. This assertion is supported by the correlation coefficient for them, 0.282[98], significant at the level of 0.001.

Figure 7.9 Mean and median household expenditure shown in self-assessments

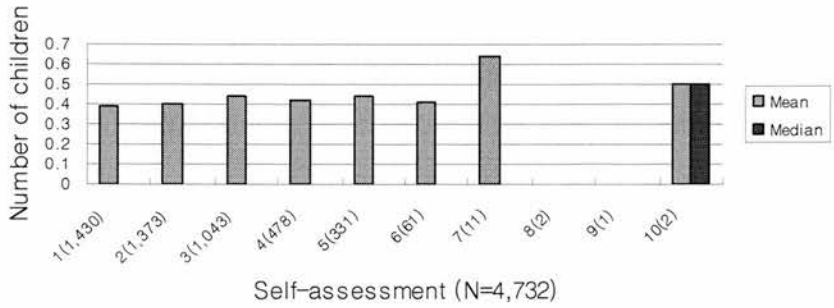


7.4.5 General household matters

Number of children in the household

Figure 7.10 below shows the mean and the median number of children given in self-assessments by the deprivation poor. Since there is only a slight difference in the mean number of children shown in the self-assessments, it is inferred that there is little relationship between the number of children and self-assessment. This is confirmed by their correlation coefficient, which is not significant at the level of 0.001. The variable of number of children therefore is not included in regression models in Section 7.5.

Figure 7.10 Mean and median number of children given in self-assessments



[98] The correlation coefficient is derived from the relationship between the self-assessment and logged expenditure. The correlation coefficient for raw expenditure appears to be 0.242. Therefore, the log formatted expenditure will be used in relevant regression models.

Gender and age of the head of household, location, marital status of the head of household and lone parents

Table 7.7 below presents the Gamma values, which show correlations between self-assessment and the variables of gender, age of the head of household, location, marital status of the head of household and lone parents. For analysis of the correlation, the sub-categories of the variables indicated in Table 4.4 are used as ordinal variables, except for the variable of head of household's age, which uses the sub-variables in the order: below 30; 30-39; 40-49; 50-64; over 64.

Table 7.7 Correlations between self-assessment and the variables of gender, age of the head of household, location, marital status of the head of household and lone parents

	Gamma	Number of households in data set
Gender	-0.221 ***	4,731
Head of household's age	-0.116 ***	4,732
Location	-0.006	4,732
Head of household's marital status	-0.272 ***	4,731
Lone parents	-0.255 ***	4,732

*** $p < 0.001$

As to the relationship between self-assessment and the gender of the head of deprivation poor households, Table 7.7 shows that the value of Gamma amounts to -0.221, which means that households with a female head give a more negative self-assessment than those with a male head.

The Gamma value for the age of the head of household, -0.116, also indicates that the head of household's age has a negative relationship with self-assessment, which means that there is a tendency for households to see themselves as poorer as the head of household becomes older.

Location does not appear to be related to self-assessment. Thus, the variable of location is not included in relevant regression models.

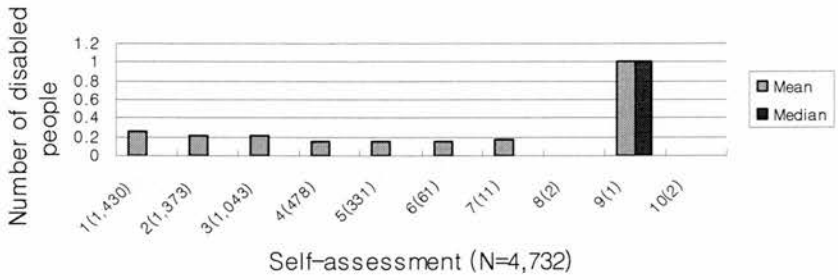
The head of household's marital status is analysed as having a negative relationship with self-assessment as the Gamma value amounts to -0.272. Considering the composition of sub-variables, which are in order of 'married', 'single' and 'separated/divorced/widowed', it shows that households where the head is separated/divorced/widowed have a more negative self-perception than households where the head is single or married – especially the latter.

The variable of lone parents is also seen to have a negative relationship with self-assessment, as the Gamma value amounts to -0.255. This value means that a household with a single mother or single father gives a more negative self-assessment than other households.

Number of disabled people

Figure 7.11 below shows the mean and the median number of disabled people given in self-assessments by the deprivation poor. The mean pattern implies that the relationship between the number of disabled people and self-assessment is not strong. The correlation coefficient, -0.078, significant at the level of 0.001, confirms that their relationship is very weak.

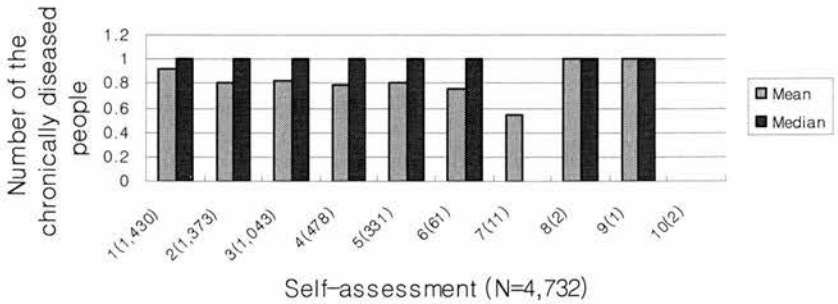
Figure 7.11 Mean and median number of disabled people given in self-assessments



Number of chronically ill people

Figure 7.12 below offers the mean and the median number of chronically ill people according to the self-assessments. As there is little variation in the mean of the variable derived from the self-assessments, it is inferred that the number of chronically ill people has little effect on the self-assessment. The correlation coefficient, -0.055, significant at the level of 0.001, shows that the relationship between the two is very weak.

Figure 7.12 Mean and median number of chronically ill people recorded in self-assessments



So far, this investigation into the relationship between self-assessment and the 16 variables has confirmed which variables have a relationship with self-assessment by the deprivation poor. Having excluded the three variables of debts, number of children and location, we can now fix the remaining 13 variables as being significantly related to self-assessment. The next section assesses which of these 13 variables have an impact on self-assessment, and the extent of their impact.

7.5 Impact of variables on self-assessment by the deprivation poor

As discussed in Chapters 5 and 6, this study set up six models in order to examine whether or not the relevant variables have an impact on self-assessment, and to investigate the extent of their influence on self-assessment. These six models are made up of five partial models, Model I to Model V, and one full model, Model VI. The results of the regressions on the six models are shown in Table 7.8 below.[99]

7.5.1 Explanatory power of the models

The explanatory powers of the five partial models in Table 7.8 can be arranged according to the degree, from the greatest to the least: Model IV (adj. $R^2 = 0.138$) referring to standard of living; Model III (adj. $R^2 = 0.132$) representing resources; Model V (adj. $R^2 = 0.066$) reflecting general household matters; Model I (adj. $R^2 = 0.056$) for income; and Model II (adj. $R^2 = 0.039$) for deprivation. The power of Model VI, which includes all relevant variables, appears to be 21% (adj. $R^2 = 0.208$).

There are a few points worth noting with regard to these explanatory powers. Firstly, the variable of deprivation scores explains only 4% of self-assessment by the deprivation poor, compared with 33% for Korean households in general. This 29% difference is expected, since the explanatory power of deprivation scores is derived from the deprivation poor. It shows that when the poor are identified using deprivation scores, the effect of deprivation scores on self-assessment by the deprivation poor is sufficiently reflected.

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[99] Multicollinearity does not appear to be problematic in any of the six models when all the variance inflation variables (VIF) in the models are very low. Except for Models I and II, which use one variable, the highest VIF of Models III to VI appear to be as follows: 1.610 in the variable of work status of others in Model III; 1.001 in both the variables of basic deprivation scores and expenditure in Model IV; 1.078 in the variable of the number of chronically ill people in Model V; and 1.478 in the variable of expenditure in Model VI.

Table 7.8 Multiple regression of the six models in the deprivation poor

Factors/Variables	Model I (ß)	Model II (ß)	Model III (ß)	Model IV (ß)	Model V (ß)	Model VI (ß)
Income	0.238					0.104
Deprivation scores		-0.197				-
Resources						
Years spent in education by the head			0.112			0.073
Work status of the head						
- (Permanent employee)			-			-
- Employer/ self-employed			-			0.082
- Temporary employee			-0.127			-
- unemployed			-0.078			-
- Other			-0.200			-
Assets (natural log)			0.249			0.174
Debts			N/A			N/A
Standard of living						
Basic deprivation scores				-0.242		-0.192
Expenditure (natural log)				0.273		0.144
General household matters						
Number of children					N/A	N/A
Gender of the head: male					-	-
Age of the head						
- (65+)						
- < 30					0.078	0.089
- 30-39					-	-
- 40-49					-	-
- 50-64					0.072	-
Location						
- (Big cities)					N/A	N/A
- Medium or small cities					N/A	N/A
- Rural areas					N/A	N/A
Marital status of the head						
- (Married)						
- Single					-	-
- Separated/divorced/ widowed					-0.213	-0.077
Lone parents						
- (Neither single father nor mother)						
- Single mother					-	-
- Single father					-	-
Number of disabled people					-0.091	-0.082
Number of chronically ill people					-0.056	-
Adjusted R^2	0.056	0.039	0.132	0.138	0.066	0.208
F	283.370***	191.690***	142.929***	378.921***	67.388***	154.227***

*** $p < 0.001$. NB. All the standardised regression coefficients in this table are significant at the level of 0.001.

Secondly, Model III for resources and Model IV for standard of living explain around 14% of self-assessment by the deprivation poor, while Model V for general household matters explains 7% of their self-assessment. This shows that the variables related to resources or standard of living have twice the explanatory power for self-assessment by the deprivation poor than those associated with general household matters.

Thirdly, Model VI explains 21% of self-assessment by the deprivation poor, half the explanatory power it has for self-assessment by Korean households in general (42%). The main reason for this reduction is that the effect of deprivation scores on self-assessment has been considered in the identification of the deprivation poor.

7.5.2 Impact of each variable on self-assessment

Table 7.8 above also shows the standardised coefficients of each variable according to the six models. This study primarily focuses on the coefficients in Model VI, since they are obtained from regression of all relevant variables.

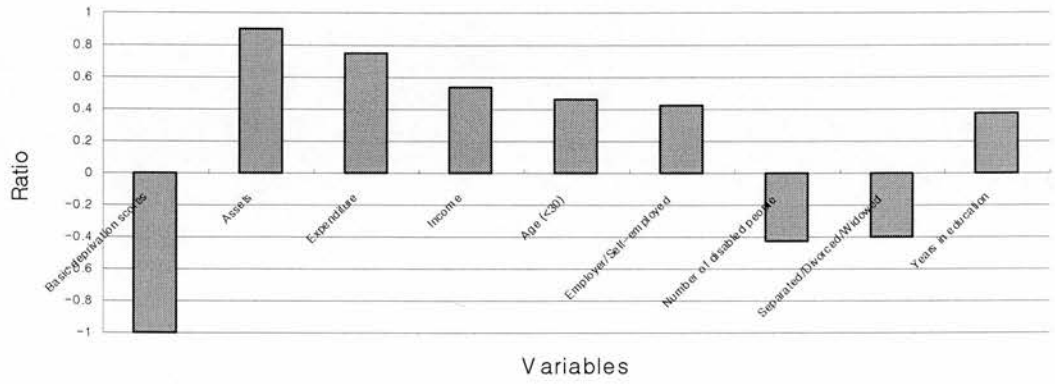
The coefficients of Model VI indicate that there is a positive relationship between self-assessment by the deprivation poor and the following variables: assets (β= 0.174), expenditure (β= 0.144), income (β= 0.104), head of household aged below 30 (β= 0.089), head of household's work status as employer or self-employed (β= 0.082),[100] number of years spent in education by the head of household (β= 0.073); and a negative relationship with the following variables: basic deprivation scores (β= -0.192), number of disabled people (β= -0.082), head of household being separated/widowed/divorced (β= -0.077).

In order to examine the relative extent of the influence of each variable on self-assessment, Figure 7.13 below is generated by transforming the coefficients of Model VI into a ratio where the coefficient of the variable of basic deprivation scores is set at -1. Compared with the degree of impact of the variable of the basic deprivation scores, the impact of the remaining variables appears to be: assets (91%), expenditure (75%), income (54%), head of household aged below 30 (46%), head of household's work status as employer or self-employed (43%), number of disabled

[100] As the coefficient of this variable is not significant in partial model, the impact of this variable should be interpreted as very weak.

people (43%), head of household being separated/divorced/widowed (40%) and number of years spent in education by the head of household (38%).

Figure 7.13 Ratio of values of variables to the value of basic deprivation scores



NB. The ratio of the variables is calculated against the value of basic deprivation scores, which is set at -1.

These results regarding the extent of the impact of each variable on self-assessment provide some significant findings. Firstly, the impact of deprivation scores disappears, which has a major impact on self-assessment by both the income poor and by Korean households in general. As mentioned above, this is due to the fact that the impact of deprivation scores is already considered in the identification of the deprivation poor. The disappearance of the impact of deprivation scores shows that poverty policies focusing on maintaining deprivation at the level of the deprivation poverty line will not be effective in improving self-assessment by the deprivation poor.

Secondly, basic deprivation scores are analysed as having the greatest impact on self-assessment by the deprivation poor. Since this means that reducing basic deprivation scores would be the most effective way of improving self-assessment by the deprivation poor, it strongly suggests that being deprived of basic necessities (which generates the basic deprivation scores) is a major problem for the deprivation poor.

Thirdly, assets, expenditure and income are judged to have a significant impact on self-assessment by the deprivation poor. This shows that comprehensive policies covering aspects of income and deprivation need to be established to improve self-

assessment by the deprivation poor. The fact that assets and expenditure cannot be improved within a short period of time suggests that long-term policies need to be established in order to improve self-assessment by the deprivation poor.

Fourthly, certain variables related to general household features such as age, marital status and disability appear to have some impact on self-assessment. This shows that assessment by the deprivation poor is affected by factors such as whether the head of household is old or young, married or single, etc., and whether or not there are disabled people in household. However, as the impact of these variables is not critical, we can infer that poverty policies based on the features of these variables would not be particularly effective in improving self-assessment by the deprivation poor.

7.6 Conclusion

Chapter 7 has discussed self-assessment of their situation by the deprivation poor. The starting point for this investigation was to use the number of income poor (18.5% of the total sample households) to identify the deprivation poor. Thus, the deprivation poverty line, which defines the deprivation poor at 18.5%, was established at the deprivation score of 5.708.

After identifying the deprivation poor, their self-assessment was explored. This investigation showed that their self-assessment is more negative than that of the income poor. This finding implied that deprivation is better than income at distinguishing households with negative self-assessment from households with positive self-assessment. Nevertheless, it has been argued that deprivation is insufficient to identify those living in real poverty as poor. Firstly, as it appears that 19% of the deprivation poor do not see their situation as poor, it has been inferred that there may be many deprivation poor whose true situation is not poor. Furthermore, since 63% of the self-assessed poor who see themselves as poor are not identified as deprivation poor, a number of households living in real poverty may not be regarded as poor when deprivation scores are used to identify the poor. These two points allowed us to infer that deprivation is not sufficient to identify those living in real poverty as poor.

The living conditions of the deprivation poor were examined in an attempt to

determine the reasons for their negative self-assessment. It was confirmed that the harshness of their living conditions prevents them from leading a typical life, and argued that these tough conditions affect their negative self-assessment.

In order to explore the impact of the 16 variables on self-assessment, this chapter examined the relationship between these variables and self-assessment. It was found that three of these variables – debts, number of children and location – had no relationship with self-assessment, while the remaining 13 are significantly related to self-assessment. This meant that these 13 variables would be used for regressions.

The regressions on the six models provided results showing which variables have an effect on self-assessment, and the extent of their influence. The results of these regressions raised some important points regarding poverty policies. Firstly, that basic deprivation is a major problem for the deprivation poor. Secondly, that poverty policies aimed at increasing assets, expenditure and income would be effective in improving self-assessment by the deprivation poor. Thirdly, that policies related to general household features such as age, marital status and disability will be less effective in improving self-assessment by the deprivation poor.

CHAPTER 8. SELF-ASSESSMENT BY THE CONSISTENTLY POOR

Chapter 8 explores self-assessment of their situation by the consistently poor. As discussed in Chapter 3, this study uses the term 'the consistently poor' to denote those who are identified as poor in terms of both income and deprivation. This investigation into their self-assessment and related issues such as identification of the consistently poor will be the first research of its kind in Korea, since the consistently poor have never been addressed there.

This chapter is constructed as follows. Section 8.1 identifies the consistently poor using both the official income poverty line and the deprivation poverty line established in Chapter 7. Section 8.2 explores how the consistently poor assess themselves, revealing that self-assessment by the consistently poor is the most negative of all the poor groups. Section 8.3 examines their income level and living conditions. The fact that their income is the lowest and their living conditions the most severe among the groups of poor shows why their self-assessment is the most negative. Section 8.4 investigates the relationship between the 16 variables and self-assessment by the consistently poor. On the basis of this investigation, Section 8.5 explores which variables have an impact on their self-assessment, and the extent of the influence of these variables. Section 8.6 offers a conclusion of this chapter.

8.1 Identification of the consistently poor

Chapter 6 identified the income poor using the official poverty line, while Chapter 7 used the deprivation poverty line to define the deprivation poor. Thus, the income poor are established as poor due to their low income, and the deprivation poor are identified as poor due to their high levels of deprivation. This raises the following questions: first, if a household earns a low income but does not suffer high deprivation, can it be regarded as poor? Second, if a household experiences severe deprivation but earns a high income, can it be regarded as poor? These questions arise from the idea that, as Ringen (1988) argues, income is a quite different indicator from deprivation in relation to measuring poverty. This implies that the two indicators should be used together in order to distinguish the poor from the non-poor. On the basis of this argument, several studies using the two indicators together have

empirically identified a distinct group of the poor, the consistently poor,[101] from the income poor or the deprivation poor (see Muffels *et al.*, 1992: Halleröd, 1995b: Nolan & Whelan, 1996). For a comprehensive exploration of self-assessment by the poor, therefore, we need to explore self-assessment by the consistently poor as well as that of the income poor and the deprivation poor.

As a preliminary to exploring self-assessment by the consistently poor, this section identifies them using an income poverty line and a deprivation poverty line. When the two poverty lines are used, Korean households can be divided into four groups, as seen in Table 8.1 below. The consistently poor are those who are both income poor and deprivation poor. 'The income poor *only*' refers to those who are income poor but not deprivation poor, while 'the deprivation poor *only*' refers to those who are deprivation poor but not income poor. The non-poor are those who are neither income nor deprivation poor.

Table 8.1 Four groups identified by an income poverty line and a deprivation poverty line

	The deprivation poor	The non-deprivation poor
The income poor	**The consistently poor**	The income poor *only*
The non-income poor	The deprivation poor *only*	The non-poor

As discussed in Section 6.1, this study uses the official poverty line as an income poverty line. It was established in Section 7.1 that a deprivation score of 5.708 was set as the deprivation poverty line. Therefore, this study identifies the consistently poor as those whose income falls below the income poverty line and who simultaneously have a deprivation score of 5.708 or more. Table 8.2 below shows the number of consistently poor identified using the two poverty lines, as well as the size of the other three groups of poor. The consistently poor amount to 9.5% of the data set; the income poor *only* to 9.0%; the deprivation poor *only* to 9.0%; and the non-poor to 72.5%.

[101] To distinguish the income or the deprivation poor from this group, this study calls it the consistently poor, adopting the term used by Nolan and Whelan (1996).

Table 8.2 Size of the 4 groups identified using the income poverty line and the deprivation poverty line

	The deprivation poor	The non-deprivation poor	Total
The income poor (Number of households in data set)	**9.5% (2,438)**	9.0% (2,296)	18.5% (4,734)
The non-income poor (Number of households in data set)	9.0% (2,294)	72.5% (18,534)	81.5% (20,828)
Total (Number of households in data set)	18.5% (4,732)	81.5% (20,830)	100% (25,562)

By comparing the number of consistently poor (9.5%) with the number of income or deprivation poor (18.5%), we can see that the former amounts to only half of the latter two groups. This means that about 50% of the income poor are not identified as deprivation poor, and that about 50% of the deprivation poor are not identified as income poor. This inconsistency between the composition of the income poor and the deprivation poor illustrates how differently the poor can be defined according to the use of income or deprivation – confirming that income is a quite different indicator from deprivation in relation to identification of the poor.

This finding that the consistently poor only amount to half of the income poor or the deprivation poor also shows that using the consistently poor to represent the poor as a whole in a society will considerably reduce the number of poor who are recognised. This leads us to the argument that the extent of poverty in a society may be exaggerated by using only income or deprivation to identify the poor (Ringen, 1988). Thus, there is the possibility that a number of households that are not poor may be regarded as poor when either income or deprivation is used to identify the poor in a society.

Although the income poor *only* or the deprivation poor *only* can be included in a more comprehensive group when either income or deprivation is used to identify the poor, it is reasonable that the consistently poor should be distinguished from the other two poor groups because the consistently poor are identified as poor by using both poverty lines rather than only one. This shows that the consistently poor can be regarded as those who need to be addressed first in a society, before the income poor or the deprivation poor.

Turning our attention to the comparison of the number of consistently poor

(9.5%) and that of social assistance recipients (around 5%), we see that the former is almost double the latter. The big difference between these two groups clearly illustrates that the consistently poor, who can be expected to experience more severe poverty than the income or the deprivation poor, have not been well served by the government. This strongly suggests that the government protects the poor less than it should (see Section 9.2 for details).

8.2 Description of self-assessment by the consistently poor

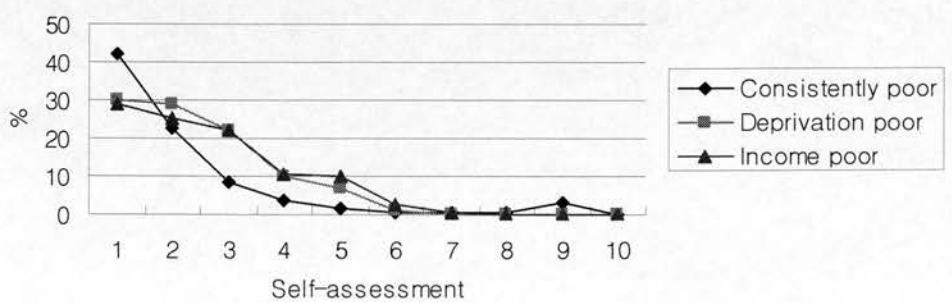
As the consistently poor are simultaneously income poor and deprivation poor, we can expect their perception of their situation to be fairly negative. Table 8.3 below confirms this assumption. It can be seen that the percentage of the consistently poor decreases steadily from 41.5% giving a self-assessment of 1 to 0.8% giving a self-assessment of 6, staying at around 0% beyond a self-assessment of 6. This pattern shows that the self-perception of the consistently poor is fairly negative.

Table 8.3 Self-assessment by the consistently poor

Self-assessment	1	2	3	4	5	6	7	8	9	10	Total
%	**41.5**	**29.5**	**16.9**	6.9	4.2	0.8	0.2	0.0	0.0	0.0	100
(Number of households in data set)	(1,012)	(718)	(412)	(168)	(102)	(20)	(4)	(1)	(1)	(0)	(2,438)
Cumulative percentage	**41.5**	**71.0**	**87.9**	94.8	99.0	99.8	100	100	100	100	100

For an examination of the degree of negative self-assessment by the consistently poor, Figure 8.1 below compares the percentage of households in each self-assessment band according to the three groups, the consistently poor, the income poor and the deprivation poor.

Figure 8.1 Self-assessment by the consistently poor, the income poor and the deprivation poor



By comparing these patterns of self-assessment we can see that the consistently poor assess themselves more negatively than the other two groups. This negative self-perception is particularly striking at the self-assessment of 1, which refers to 'very poor', the lowest perception on the 10-point scale. Thus, it can be said that self-assessment by the consistently poor is the most negative of these three groups.

Table 8.4 below also reveals how many of the consistently poor think of themselves as poor. It demonstrates that 88% of consistently poor households see themselves as poor when self-assessments of 1 to 3 are interpreted as referring to a poor position. This means that 12% of the consistently poor do not regard themselves as poor, fewer than 24% of income poor households or 19% of deprivation poor households that do not see themselves as poor. This shows that using both income **and** deprivation is better than using either income **or** deprivation in distinguishing households with a negative self-assessment from those with a more positive self-assessment. Given the possibility that households that do not see themselves as poor are not poor, this shows that the non-poor are less likely to be regarded as poor when **both** income and deprivation are used to identify the poor than when **only** income or deprivation is used.

However, this does not mean that using the two indicators together will identify any more of those living in poverty than using either indicator separately. Because the consistently poor come from both the income poor and the deprivation poor, using both income and deprivation together cannot identify as poor those who have not first been identified as poor in terms of either income or deprivation. Therefore, as discussed in Sections 6.2 and 7.2, there is a possibility that certain poor households may be missed by all three types of indicator. Table 8.4 below shows the distribution of the four kinds of poor (the consistently poor, the income poor *only*, the deprivation poor *only* and the non-poor) in each self-assessment band. This indicates that 58% of households that see themselves as 'very poor' (a self-assessment of 1), 72% of households that see themselves as 'fairly poor' (a self-assessment of 2) and 91% of households that see themselves as 'slightly poor' (a self-assessment of 3) are not identified as consistently poor. Once again, this confirms the possibility that a number of households that should be defined as poor are not, even when income and

deprivation are used together.

Consequently, using both indicators to identify the poor contributes to the exclusion of the non-poor from the poor, and does not contribute to the inclusion of households that are poor but not poor in terms of either income or deprivation.

Table 8.4 Self-assessment by the consistently poor and the consistently non-poor

Self-Assessment	1	2	3	4	5	6	7	8	9	10	Total
Consistently poor	**42.2** (1,012)	**22.4** (718)	**8.6** (412)	3.8 (168)	1.6 (102)	0.6 (20)	0.6 (4)	0.5 (1)	3.2 (1)	0 (0)	9.5 (2,438)
Income poor only	**14.5** (349)	**14.9** (476)	**13.0** (627)	7.6 (338)	6.0 (382)	3.0 (103)	1.4 (10	4.5 (9)	3.2 (1)	5.3 (1)	9.0 (2,296)
Deprivation poor only	**17.4** (418)	**20.5** (655)	**13.1** (631)	7.0 (310)	3.6 (229)	1.2 (41)	1.0 (7)	0.5 (1)	6.5 (2)	0 (0)	9.0 (2,294)
Non-poor	**25.9** (621)	**42.2** (1,350)	**65.3** (3,140)	81.5 (3,605)	88.9 (5,692)	95.1 (3,215)	97.0 (679)	94.4 (187)	87.1 (27)	94.7 (18)	72.5 (18,534)
Total	**100.0 (2,400)**	**100.0 (3,199)**	**100.0 (4,810)**	100.0 (4,421)	100.0 (6,405)	100.0 (3,379)	100.0 (700)	100.0 (198)	100.0 (29)	100.0 (21)	100 (25,562)

8.3 Income level and living conditions of the consistently poor

This section explores the levels of poverty among the consistently poor, in an investigation that is expected to be helpful in understanding why they give such negative self-assessments.

8.3.1 Income level of the consistently poor

In order to examine the income level of the consistently poor, this section compares their income level with that of the income poor and the income poor *only*. The comparison is made between these three groups because they are all identified as poor in terms of income, using the official poverty line. Since this is set at a low level (see Section 6.3), comparing their income levels will show how low the income level of the consistently poor is

Table 8.5 below shows the mean monthly income of these three groups. It reveals that the mean income of the consistently poor amounts to 618,000 Korean won (GBP 309), while that of the income poor is 648,000 Korean won (GBP 324) and that of the income poor *only* is 681,000 Korean won (GBP 341).

Table 8.5 Mean income of the consistently poor, the income poor and the income poor *only*

(unit: 000 Korean won)

	Mean income	Number of households in data set	Standard deviation
The consistently poor	618 (GBP 309)	2,438	329.3478
The income poor	648 (GBP 324)	4,734	337.7562
The income poor *only*	681 (GBP 341)	2,296	343.5685

Comparing the income of the consistently poor with that of the income poor shows that income of the former is 4.6% lower than that of the latter. This suggests that the consistently poor lead a tougher life in terms of income than the income poor. Furthermore, comparing the income of the consistently poor with that of the income poor *only* shows that the former is 9.3% lower than that of the latter. Therefore, these comparisons show that the consistently poor have the lowest income of the three groups.

8.3.2 Living conditions of the consistently poor

This section uses two methods to examine the living conditions of the consistently poor. One compares the mean deprivation scores of these three groups that are all identified as poor using the deprivation poverty line: the consistently poor, the deprivation poor and the deprivation poor *only*. The other method uses 25 deprivation items to investigate the extent of their deprivation. The first method will reveal how much more deprived on average the consistently poor are than the other two groups, while the second will show how much more deprived than the other two groups they are in terms of deprivation items.

8.3.2.1 Deprivation scores of the consistently poor

Table 8.6 below shows the mean deprivation scores of the consistently poor, the deprivation poor and the deprivation poor *only*. It demonstrates that the consistently poor have a deprivation score of 8.6, which means that they live without at least 8 of the 25 deprivation items. The deprivation poor have a score of 8.2 and the deprivation poor *only* a score of 7.7. Comparing the score of the consistently poor with that of the deprivation poor tells us that the former are 4.9% more deprived than the latter. Considering that Section 7.3 revealed that the deprivation poor experience

severe deprivation, this confirms that the consistently poor live in extremely difficult circumstances. Table 8.6 also shows that the mean score of the consistently poor stays 11.7% higher than that of the deprivation poor *only*, confirming that the consistently poor suffer the greatest deprivation of these three groups.

Table 8.6 Mean deprivation scores of the consistently poor, the deprivation poor and the deprivation poor *only*

	Mean deprivation score	Number of households in data set	Standard deviation
The consistently poor	8.6	2,438	2.1831
The deprivation poor	8.2	4,732	2.0356
The deprivation poor *only*	7.7	2,294	1.7601

8.3.2.2 Deprivation of the consistently poor in terms of deprivation items

This section uses the second method of examining the living conditions of the consistently poor, comparing the degree of deprivation experienced by the three groups in terms of deprivation items. The comparison is set up between the consistently poor and the deprivation poor, and between the consistently poor and the deprivation poor *only*.

Table 8.7 below shows the extent of deprivation experienced by the consistently poor and the deprivation poor according to each item. The items are arranged in descending order according to the multiple of deprivation shown in column (A/B).[102] This table indicates that the consistently poor are more deprived of 14 items than the deprivation poor, and less deprived of 5 items. There is little difference in the extent of deprivation for the remaining 6 items. This shows that the consistently poor are deprived of more items than the deprivation poor. The low numbers in the left hand column (Ranking) tell us that most of the 14 items that the consistently poor are more deprived of than the deprivation poor are ranked as essentials, while the remaining items generally have large numbers indicating that they are less essential. This pattern is confirmed by the correlation coefficient, -0.605, significant at the level of 0.001, which is derived from the correlation between the two columns 'Ranking' and '(A/B)'. Thus, it can be said that the consistently poor

[102] See section 7.3.2 for details of what the columns in Table 8.5 represent.

are more deprived of more basic items than the deprivation poor.

Table 8.7 Extent of deprivation of the consistently poor and the deprivation poor in terms of deprivation items

Ranking		% don't have/can't afford (Consistently poor) (A)	% don't have/can't afford (Deprivation poor) (B)	Ratio (A/B)
3	Heating using gas or paraffin, or central heating	12.2	9.0	1.4
16	Mobile phone	28.0	21.2	1.3
1	Refrigerator	2.1	1.8	1.2
5	Washing machine	21.1	16.9	1.2
8	At least one pair of shoes (adults only)	42.5	36.6	1.2
7	Access to public transport within 10-minute walk	9.3	8.2	1.1
9	At least two warm coats (all members)	45.4	41.8	1.1
10	At least one best outfit for special occasions (adults only)	51.2	47.2	1.1
12	Fresh fruit every week	78.6	71.0	1.1
13	Meat or fish every week	71.8	64.6	1.1
14	Private insurances on top of social insurance	77.1	71.0	1.1
15	Savings or individual pension for old age	85.0	76.0	1.1
18	Eating out at least twice a year with family	72.1	68.5	1.1
21	Microwave	39.4	37.1	1.1
2	Dental treatment in a dental clinic	36.1	36.3	1.0
4	Treatment in hospital when necessary	20.6	21.2	1.0
11	Saving for a rainy day	88.6	86.5	1.0
22	Holidays away from home once a year	82.8	84.2	1.0
23	Taking oriental tonics or medicine to promote a nutritious diet and health	80.5	80.1	1.0
25	VCR or DVD player	34.2	35.5	1.0
6	Number of bedrooms appropriate to the needs of the household	7.2	7.9	0.9
17	Personal computer	26.2	29.9	0.9
19	Internet	29.3	33.3	0.9
20	Car	31.9	37.1	0.9
24	Hobby or leisure activity	76.9	81.5	0.9
Total		39.1	36.6	1.1

Table 8.8 below demonstrates the extent of deprivation between the consistently poor and the deprivation poor *only* in terms of deprivation items. It can be seen that the consistently poor are more deprived of 15 items than the deprivation poor *only*, similarly deprived of 3 items and less deprived of 7 items. This shows that the consistently poor experience more deprivation than the deprivation poor *only*. Since the correlation coefficient between the 'Ranking' and '(A/B)' columns in Table 8.8 is analysed as -0.503, significant at the level of 0.05, we can confirm that the consistently poor suffer more deprivation in more basic items than the deprivation poor *only*.

Table 8.8 Extent of deprivation of the consistently poor and the deprivation poor *only* in terms of deprivation items

Ranking		% don't have/can't afford (Consistently poor) (A)	% don't have/can't afford (Deprivation poor only) (B)	Ratio (A/B)
3	Heating using gas or paraffin, or central heating	12.2	5.7	2.1
16	Mobile phone	28.0	13.9	2.0
5	Washing machine	21.1	12.5	1.7
1	Refrigerator	2.1	1.4	1.5
8	At least one pair of shoes (adults only)	42.5	30.4	1.4
7	Access to public transport within 10-minute walk	9.3	7.0	1.3
13	Meat or fish every week	71.8	57.0	1.3
15	Savings or individual pension for old age	85.0	66.5	1.3
9	At least two warm coats (all members)	45.4	37.8	1.2
10	At least one best outfit for special occasions (adults only)	51.2	43.0	1.2
12	Fresh fruit every week	78.6	63.0	1.2
14	Private insurances on top of social insurance	77.1	64.4	1.2
18	Eating out at least twice a year with family	72.1	64.7	1.1
21	Microwave	39.4	34.6	1.1
11	Saving for a rainy day	88.6	84.3	1.1
2	Dental treatment in a dental clinic	36.1	36.5	1.0
22	Holidays away from home once a year	82.8	85.7	1.0
23	Taking oriental tonics or medicine to promote a nutritious diet and health	80.5	79.8	1.0
4	Treatment in hospital when necessary	20.6	21.9	0.9
25	VCR or DVD player	34.2	37.0	0.9
24	Hobby or leisure activity	76.9	86.3	0.9
6	Number of bedrooms appropriate to the needs of the household	7.2	8.6	0.8
17	Personal computer	26.2	33.8	0.8
19	Internet	29.3	37.6	0.8
20	Car	31.9	42.6	0.7
Total		39.1	33.9	1.2

So far, in order to examine the income level of the consistently poor, this section has compared the income levels of the consistently poor, the income poor and the income poor *only*. In order to examine the severity of their living conditions, the degree of deprivation experienced by the consistently poor was compared with that of the deprivation poor and the deprivation poor *only*. As a result it was confirmed that the consistently poor live in worse conditions and with a lower income than the other poor groups. This suggests that the consistently poor may be a more valid target group that should be protected before any other groups, especially if the budget will not stretch to securing the income poor or the deprivation poor as well. Finally, the fact that their situation is the worst of the three poor groups explains why the consistently poor give themselves the most negative self-assessment.

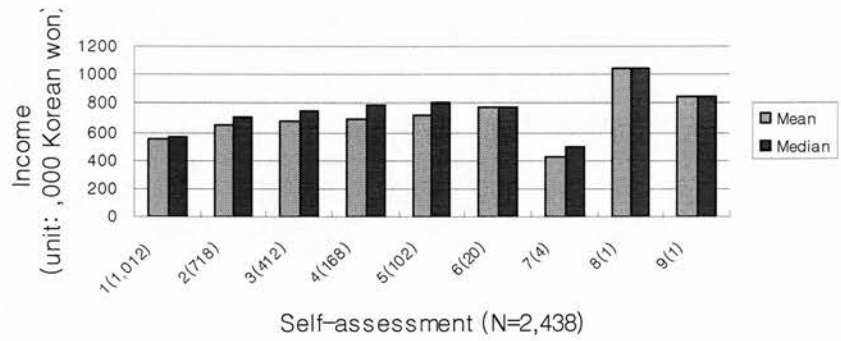
The next section investigates the relationship between self-assessment and the 16 variables, as a preliminary to exploring the issue of which variables have an impact on self-assessment by the consistently poor

8.4 Relationship between self-assessment by the consistently poor and the sixteen variables

8.4.1 Income

Figure 8.2 below shows the mean and the median incomes given by the consistently poor in their self-assessments. This figure indicates a positive relationship between the mean and the median income and self-assessment by the consistently poor, although both incomes change randomly in self-assessments of 7 to 9.[103] The correlation coefficient between income and self-assessment is analysed as 0.173,[104] significant at the level of 0.001.

Figure 8.2 Mean and median income of the consistently poor given in self-assessments



8.4.2 Deprivation scores

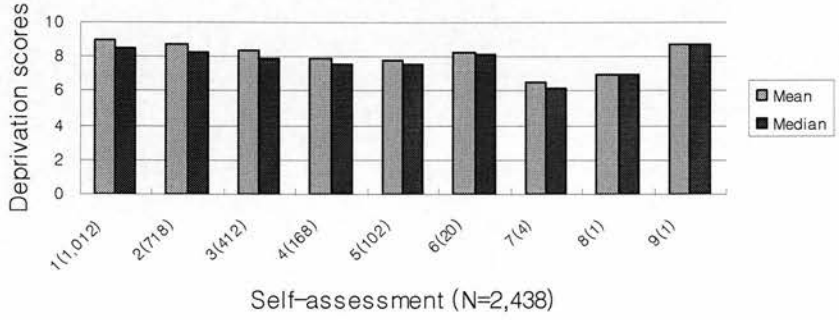
Figure 8.3 below shows the mean and the median deprivation scores given in self-

[103] Although the income pattern of consistently poor households giving self-assessments of 7 to 9 is fairly random, its impact on the relationship between the income of the consistently poor and their self-assessment would be slight, since only 6 households gave self-assessments of 7 to 9. These 6 households include 4 that gave a self-assessment of 7, 1 that gave a self-assessment of 8, and 1 that gave a self-assessment of 9. The 6 households represent just 0.2% of consistently poor households. Thus, it would be useful to remember this point in the interpretation of the relationships between self-assessment and the remaining variables, especially in the relevant figures.

[104] The correlation coefficient is calculated by analysing the relationship between self-assessment and raw income rather than log formatted income, since the coefficient for raw income appears to be larger than that for log formatted income (0.107). For this reason, raw income will be used for the regression to be discussed in section 8.5 below.

assessments by the consistently poor. The pattern of these scores shows that the relationship between self-assessment and deprivation scores is negative. The coefficient for the deprivation scores and self-assessment appears to be -0.155, significant at the level of 0.001.

Figure 8.3 Mean and median deprivation scores given in self-assessments

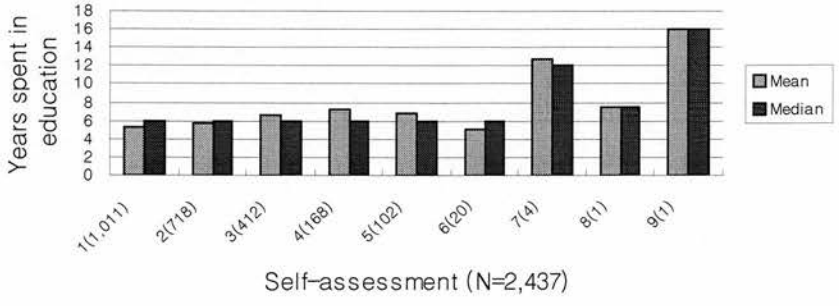


8.4.3 Resources

Number of years spent in education by the head of household

Figure 8.4 below shows the mean and the median number of years spent in education by the head of household, according to self-assessments given by the consistently poor. It can be seen that the relationship between the number of years spent in education and self-assessment is positive. This positive relationship is supported by their correlation coefficient, which amounts to 0.127, significant at the level of 0.001.

Figure 8.4 Mean and median number of years spent in education by the head of household given in self-assessments

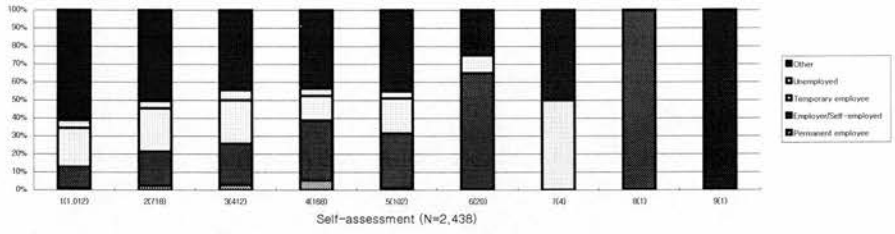


Work status of the head of household

Figure 8.5 below shows how each of the five types of work status given by the head

of household is composed. This figure shows that as self-assessment becomes positive as the ratio of 'temporary employee' and 'other' decreases and the ratio of 'employer or self-employed' and 'permanent employee' increases. This pattern suggests that there is a relationship between the head of household's work status and their self-assessment. As the value of Cramer's V[105] showing the relationship between work status and self-assessment appears to be 0.128, significant at the level of 0.001, we can say that there is some relationship between the work status of the head of household and self-assessment.

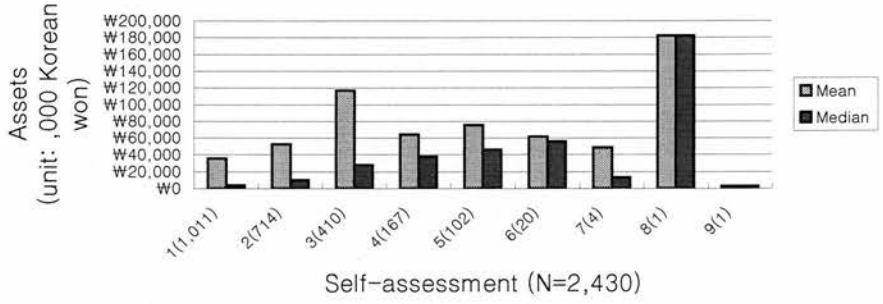
Figure 8.5 Work status of the head of household given in self-assessments



Assets

Figure 8.6 below provides the mean and the median assets declared in the self-assessments. The relationship between the two is seen to be positive, especially when the pattern of the median assets is observed, increasing steadily as self-assessment becomes more positive. This positive relationship is confirmed by their correlation coefficient, which amounts to 0.295,[106] significant at the level of 0.001.

Figure 8.6 Mean and median assets declared in self-assessments



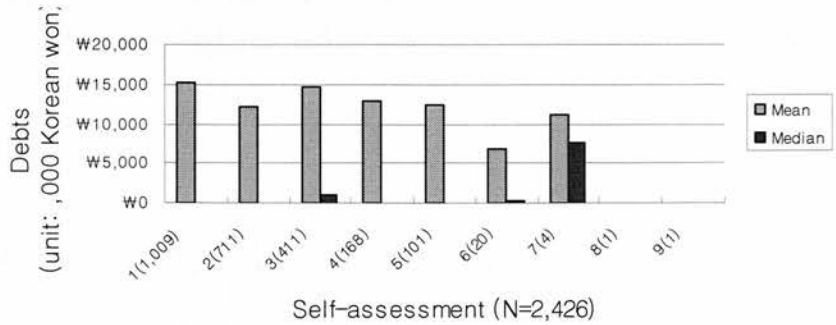
[105] As this study regards the head of household's work status as a nominal variable, Cramer's V is used to examine the relationship between it and self-assessment.

[106] Pearson's r is obtained by the analysis of a relationship between the self-assessment and logged assets rather than raw assets. The correlation coefficient of the self-assessment and raw assets is 0.035 (Pearson's r).

Debts

Figure 8.7 below presents the mean and the median debts according to the self-assessments. The pattern of the two kinds of debts indicates a very weak relationship between debts and self-assessment. As it is found that their coefficient is not significant, at the level of 0.001, the variable of debts is not included in the relevant regression models.

Figure 8.7 Mean and median debts according to self-assessments

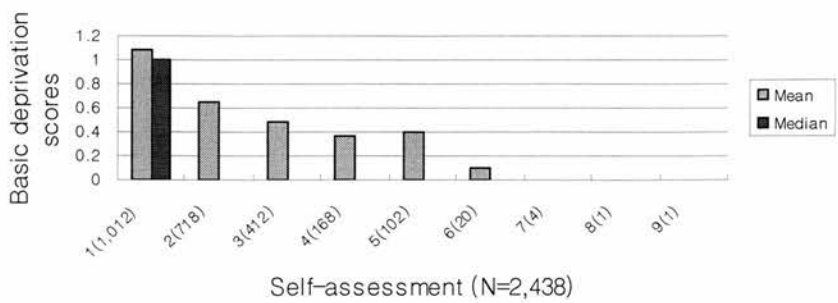


8.4.4 Standard of living

Basic deprivation scores

Figure 8.8 below shows the mean and the median basic deprivation scores given in the self-assessments. It is clear that the relationship between basic deprivation scores and self-assessment is quite negative, since the mean basic deprivation scores decrease steadily as self-assessment becomes more positive. The correlation coefficient, -0.244, significant at the level of 0.001, gives a consistent result as to their relationship.

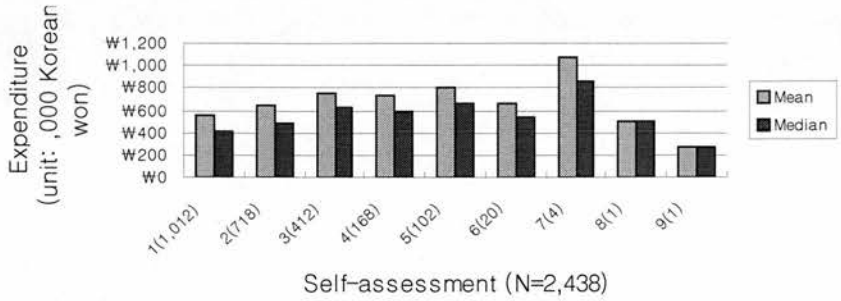
Figure 8.8 Mean and median basic deprivation scores given in self-assessments



Expenditure

Figure 8.9 below gives the mean and the median expenditure reported in the self-assessments. The pattern in this figure suggests a slightly positive relationship between expenditure and self-assessment, as the increase in expenditure is not entirely consistent with the more positive self-assessments. Their coefficient appears to be 0.188,[107] significant at the level of 0.001.

Figure 8.9 Mean and median household expenditure given in self-assessments

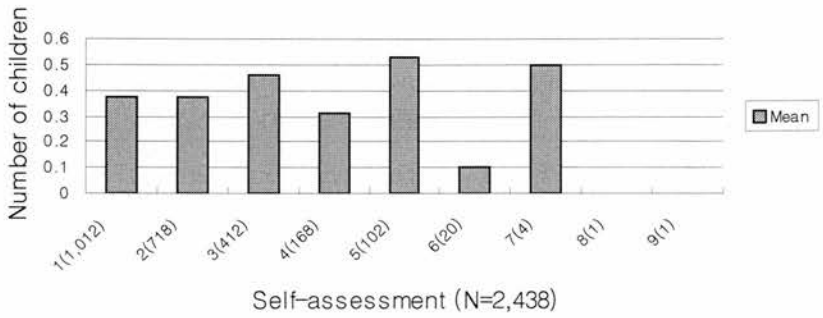


8.4.5 General household matters

Number of children in the household

Figure 8.10 below shows the mean[108] number of children given in self-assessments by the consistently poor. As the pattern of the mean is somewhat random, it can be inferred that the relationship between the number of children and self-assessment is very weak. Their correlation coefficient does not appear to be significant at the level of 0.001, therefore the variable of the number of children is not included in regression models in Section 8.5.

Figure 8.10 Mean number of children given in self-assessments



[107] The correlation coefficient is derived from the relationship between the self-assessment and logged expenditure. The correlation coefficient for raw expenditure appears to be 0.135 (Pearson's r).
[108] The median number of children is 0 in all self-assessment bands.

Gender and age of the head of household, location, marital status of the head of household and lone parents

Table 8.9 below presents the Gamma values, which show a correlation between self-assessment and the variables of gender, age of the head of household, location, marital status of the head of household and lone parents. For analysis of the correlation the sub-categories of the variables, which are discussed in Table 4.4, are used as ordinal variables.

As to the relationship between self-assessment and the gender of the head of consistently poor households, it can be seen that the value of Gamma amounts to -0.212, significant at the level of 0.001. This value means that households with a female head give a more negative self-assessment than those with a male head.

Table 8.9 Correlations between self-assessment and the variables of gender, age of the head of household, location, marital status of the head of household and lone parents

	Gamma	Number of households in data set
Gender	-0.212 ***	2,438
Head of household's age	-0.023	2,438
Location	0.050	2,438
Head of household's marital status	-0.278 ***	2,438
Lone parents	-0.198	2,438

*** $p < 0.001$

The head of household's marital status is found to have a negative relationship with self-assessment, since the value of Gamma amounts to -0.278.

The value of Gamma for the variables age of the head of household, location and lone parents does not appear to be significantly related to self-assessment, at the significant level of 0.001. Therefore, these three variables are not included in relevant regression models.

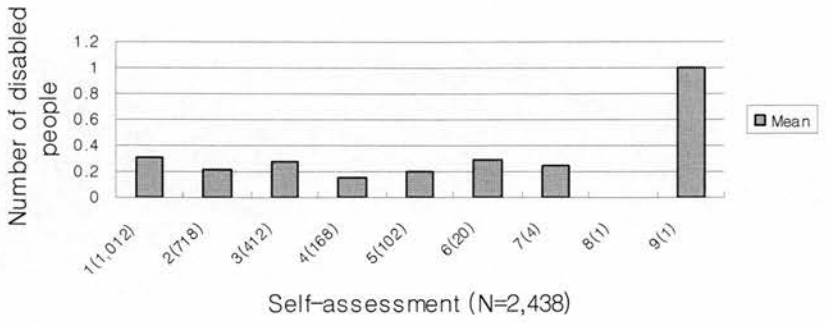
Number of disabled people

Figure 8.11 below shows the mean[109] number of disabled people given in the self-assessments. The pattern of the mean, which is rather random, implies that the relationship between the number of disabled people and self-assessment will be very weak. This is confirmed by their correlation coefficient, not significant at the level of

[109] Median of number of disabled people is 0 in all stages of self-assessment.

0.001. Thus, the variable of disabled people is not added to the variables of relevant regression models.

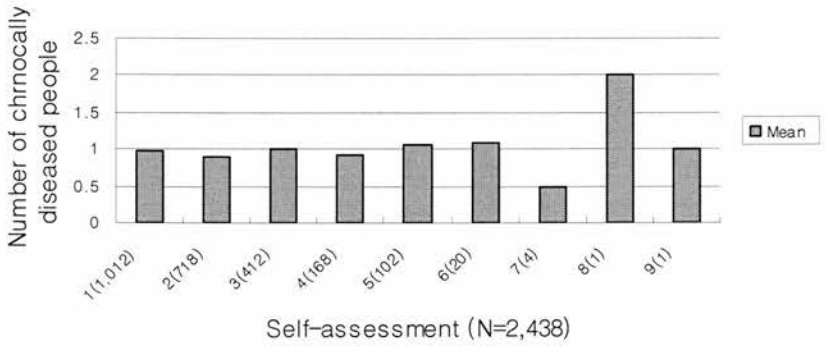
Figure 8.11 Mean number of disabled people given in self-assessments



Number of chronically ill people

Figure 8.12 below shows the mean[110] number of chronically ill people according to the self-assessments. As there is little variation in the mean of the variable in these self-assessments, it is inferred that the number of chronically ill people has a weak relationship with self-assessment. Since their correlation coefficient does not appear to be significant, the variable of chronically ill people is not included in the regression models in Section 8.5.

Figure 8.12 Mean number of chronically ill people given in self-assessments



So far, the investigation into the relationship between self-assessment and the 16 variables has confirmed that 9 variables are significantly related to self-assessment by the consistently poor. These 9 variables – income, deprivation scores, number of years spent in education by the head of household, work status of the head

[110] Median of number of chronically diseased people is 0 in all stages of self-assessment.

of household, assets, basic deprivation scores, expenditure, gender and marital status of the head of household – can now be selected as variables for the regression models. The next section examines which of the confirmed variables have an impact on self-assessment, and the extent of their impact.

8.5 Impact of variables on self-assessment by the consistently poor

The six models established earlier in this study to explore the impact of variables on self-assessment are also employed in this section to investigate the influence of the nine variables selected in Section 8.4. These six models consist of five partial models, Model I to Model V, and one full model, Model VI. The results of the multiple regression of the six models are shown in Table 8.10 below.[111]

8.5.1 Explanatory power of the models

In the five partial models, Model III for the factor of resources is found to explain self-assessment better than any other model, with an explanatory power of 12% (adj. $R^2 = 0.117$). Similarly, the factor of standard of living has an explanatory power of 10% (adj. $R^2 = 0.096$). As the explanatory power of the factor of general household matters stays at around 4% (adj. $R^2 = 0.039$), this power is seen as very weak. Income or deprivation scores are found to have explanatory powers of 3% (adj. $R^2 = 0.029$) or 2% (adj. $R^2 = 0.024$), respectively. The full model is found to explain 18% of self-assessment (adj. $R^2 = 0.177$).

Firstly, the variables of income and deprivation scores are found to explain only 3% and 2% of the self-assessment by the consistently poor, compared with 17% and 33% for Korean households in general. This substantial reduction in power shows that when income and deprivation scores are used to identify the poor, the effect of the two variables on self-assessment by the consistently poor is sufficiently reflected.

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[111] Multicollinearity does not appear to be problematic in any of the six models, when all the variance inflation variables (VIF) in the models are very low. Except for Models I and II, which use one variable, the highest VIF of Models III to VI appears to be as follows: 1.035 in the variable of assets in Model III, 1.001 equally in the variables of basic deprivation scores and expenditure in Model IV, 1.065 in the variable of marital status of the head in Model V, and 1.408 in the variable of expenditure in Model VI.

Table 8.10 Multiple regression of the six models in the consistently poor

Factors/Variables	Model I (ß)	Model II (ß)	Model III (ß)	Model IV (ß)	Model V (ß)	Model VI (ß)
Income	0.173					0.117
Deprivation scores		-0.155				-
Resources						
Years spent in education by the head			0.109			0.105
Work status of the head						
- (Permanent employee)						
- Employer/ self-employed			0.148			0.129
- Temporary employee			-			-
- Unemployed			-			-
- Other			-			-
Assets (natural log)			0.262			0.202
Debts			N/A			N/A
Standard of living						
Basic deprivation scores				-0.249		-0.205
Expenditure (natural log)				0.194		0.062
General household matters						
Number of children					N/A	N/A
Gender of the head: male					-	-
Age of the head						
- (65+)					N/A	N/A
- < 30					N/A	N/A
- 30-39					N/A	N/A
- 40-49					N/A	N/A
- 50-64					N/A	N/A
Location						
- (Big cities)					N/A	N/A
- Medium or small cities					N/A	N/A
- Rural areas					N/A	N/A
Marital status of the head						
- (Married)						
- Single					-0.096	-
- Separated/Divorced/ Widowed					-0.201	-
Lone parents						
- (Neither single father nor mother)					N/A	N/A
- Single mother					N/A	N/A
- Single father					N/A	N/A
Number of disabled people					N/A	N/A
Number of chronically ill people					N/A	N/A
Adjusted R^2	0.029	0.024	0.117	0.096	0.039	0.177
F	74.782***	59.652***	108.595***	131.031***	50.802***	88.018***

*** $p < 0.001$. NB. All the standardised regression coefficients in the table above are significant at the level of 0.001.

Secondly, Model III for resources and Model IV for standard of living explain around 10% of self-assessment by the consistently poor, while Model V for general household matters explains 4% of their self-assessment. This shows that the variables related to resources or standard of living are consistently twice as powerful in explaining self-assessment by the consistently poor than those associated with general household matters.

Thirdly, Model VI explains 18% of self-assessment by the consistently poor. This shows that the variables in Model VI partially explain self-assessment by the consistently poor. So how can the remaining 82% be explained?

First, we can argue that the low income and high deprivation scores of the consistently poor explain some portion of their self-assessment. As the comparison of the explanatory power of Model VI for the consistently poor (18%) and that for Korean households in general (42%) shows that there is a 24% reduction in explanatory powers between these two groups, we can infer that this reduction occurs due to low income and high deprivation level of the consistently poor.

Second, we can point out that the variables in Model VI do not consider the influence of the reference group on self-assessment by the consistently poor (of course, this argument can be applied to self-assessment by other groups, such as the income poor and the deprivation poor). According to Runciman (1966), people's feeling of relative deprivation is influenced by the reference group, whose situation they compare with their own. When his argument is expanded to address self-assessment by the consistently poor, we can argue that their self-assessment differs according to their reference groups.[112] Thus, we may suggest that self-assessment by the consistently poor will vary even in identical objective situations. Model VI would better explain self-assessment if it could include a variable on the influence of the reference group, which was not available in the data generated by the present survey.

Third, there would be other important variables that are not dealt with in Model VI, but which explain self-assessment by the poor. As discussed in

[112] According to Runciman (1966), the reference group may be a group, a single person or even an abstract idea (p. 11).

Section 4.2 and Section 5.3.1, the dynamics of change in living conditions, political perception and religion would be examples. In addition, individual expectations, such as a student's positive attitude to their future, would be regarded as a significant variable.

Fourth, a point that is always raised in the analysis of quantitative data sets is the possibility that respondents do not answer the questions truthfully. As the data set for this study dealt with a wide range of information, this problem would influence the explanatory power of Model VI.

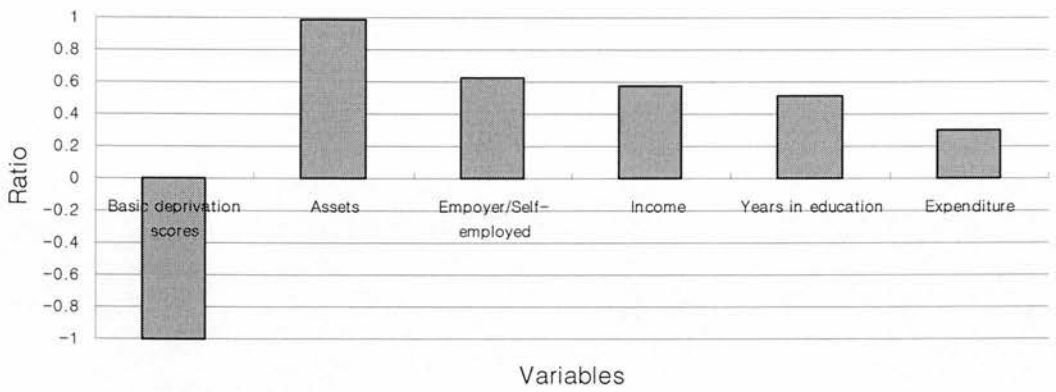
8.5.2 Impact of each variable on self-assessment

Table 8.10 above also shows the extent to which each variable influences self-assessment by the consistently poor. As in the previous chapters, this study primarily focuses on the interpretation of the regression coefficients in Model VI, a full model.

The coefficients of the following five variables show that they have a positive relationship with self-assessment. According to the extent of the impact, the variables can be arranged in order of assets (β= 0.202), head of household's work status as employer or self-employed (β= 0.129), income (β= 0.117), number of years spent in education by the head of household (β= 0.105) and expenditure (β= 0.062). In contrast to the number of variables that have a positive relationship with self-assessment, it is found that only one variable, basic deprivation scores (β= -0.205), has a negative relationship with self-assessment.

In order to compare the relative degree of influence exerted by the 6 variables, their coefficients are transformed into a ratio where the coefficient of the variable of basic deprivation scores is set at -1. The results are seen in Figure 8.13 below. Compared with the degree of impact exerted by the variable of the basic deprivation score, the impact of the remaining 5 variables appears to be assets (99%), head of household's work status as employer or self-employed (63%), income (57%), number of years spent in education by the head of household (51%) and expenditure (30%).

Figure 8.13 Ratio of values of variables to the value of basic deprivation scores



NB. The ratio of the variables is calculated against the value of basic deprivation scores, which is set at -1.

These results have several important implications for poverty policies. Firstly, basic deprivation scores are shown to have the greatest impact on self-assessment by the consistently poor. This suggests that enforced deprivation of basic necessities such as meals, electricity, telephone, water and heating remains a major problem for the consistently poor.

Secondly, the variable of assets has as great an impact as that of basic deprivation scores. This means that assets play a crucial role in self-assessment by the consistently poor. However, as it is inferred that it is very hard for the consistently poor to improve their assets in the short-term, this implies that a long-term policy is needed to improve their self-assessment.

Thirdly, income and education have a relatively significant impact on self-assessment by the consistently poor. This shows that when the income poverty line is used to identify the consistently poor, policies related to maintaining income at the current poverty line are still valid for improving their self-assessment, and that investment in education would be effective to some degree.

Fourthly, the impact of all the variables related to general household matters disappears. This shows that there is little relationship between general household features and self-assessment by the consistently poor.

8.6 Conclusion

Chapter 8 discussed self-assessment of their situation by the consistently poor. In

order to do so, the consistently poor were identified using both income and deprivation poverty lines. This showed that there are half as many consistently poor (9.5%) as either the income or deprivation poor, meaning that only half of the income poor belong to the deprivation poor, or that only half of the deprivation poor belong to the income poor. This enabled us to confirm that income is a quite different indicator from deprivation in relation to identifying the poor.

The nature of the consistently poor as being poor in terms of both income and deprivation leads us to expect that their self-perception would be more negative than the other two groups of poor. The fact that 88% of the consistently poor were found to see themselves as poor, compared with 76% of the income poor or 81% of the deprivation poor, confirmed that their self-assessment is more negative than that of the income or the deprivation poor. When considering that self-assessment reflects the situation of the person concerned, this shows that using **both** income and deprivation is more likely to prevent the non-poor from being regarded as poor than using **either** income or deprivation. Nevertheless, since it was found that 79% of households that see themselves as poor (self-assessments of 1 to 3) are not identified as consistently poor, it is possible to argue that a number of households that need to be defined as poor are not.

This chapter also examined how tough their situation is, on the assumption that this will be helpful in understanding the reason for the negative self-assessment given by the consistently poor. This confirmed that the consistently poor have lower income and experience greater deprivation than the other groups of poor, so we can safely say that the fact that they live in the most difficult circumstances of all the poor groups is associated with their negative self-assessment.

In order to examine which variables have an impact on self-assessment by the consistently poor, and the extent of the influence of each variable, we investigated the relationships between the 16 variables and self-assessment. Consequently, 9 variables were chosen for regressions.

The regressions on the six models suggested firstly, that deprivation of basic necessities among the consistently poor should be addressed as a matter of urgency; secondly, that a long-term policy needs to be established, particularly one aimed at improving the assets of the consistently poor; thirdly, that maintaining the income of

the consistently poor at the poverty line and investing in education would be of some benefit; and fourthly, that the variables of general household matters have little impact on self-assessment by the consistently poor.

CHAPTER 9. COMPARISON AND IMPLICATIONS FOR POVERTY POLICIES

The previous four chapters explored self-assessment by Korean households in general and by the three groups of the poor: the income poor, the deprivation poor and the consistently poor. On the basis of this exploration, Chapter 9 compares the results presented in Chapters 5 to 8 and then addresses their implications for poverty policies in Korea.

Chapter 9 is made up of five sections. Section 9.1 compares self-assessment by the three groups of the poor and by Korean households in general. Section 9.2 deals with a comparison of the number of income poor, deprivation poor and consistently poor. Section 9.3 compares the values of the 16 variables for each of the four groups, and assesses the relationship between self-assessment and these variables. Section 9.4 compares the results of regression on the six models in the poor groups and Korean households in general. Section 9.5 summarises this chapter.

9.1 Self-assessment by the three kinds of the poor

Table 9.1 below shows the number of Korean households surveyed and three poor groups in each self-assessment band. While the number of Korean households surveyed follows the shape of an inverted U in self-assessments of 1 to 10, we can see that the number of poor households decreases as their self-assessment becomes more positive.

Table 9.1 Self-assessment by the three poor groups

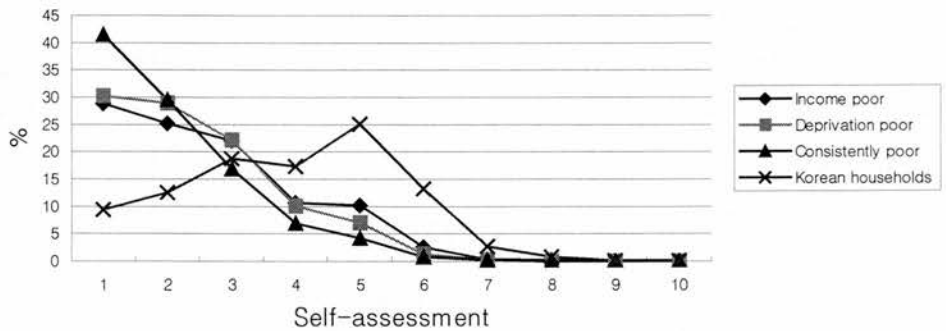
Self-Assessment	1	2	3	4	5	6	7	8	9	10	Total
Income poor	**28.8** (1,361)	**25.2** (1,194)	**22.0** (1,039)	10.7 (506)	10.2 (484)	2.6 (123)	0.3 (14)	0.2 (10)	0.0 (2)	0.0 (1)	100 (4,734)
Deprivation poor	**30.2** (1,430)	**29.0** (1,373)	**22.1** (1,043)	10.1 (478)	7.0 (331)	1.3 (61)	0.2 (11)	0.0 (2)	0.0 (1)	0.0 (2)	100 (4,732)
Consistently poor	**41.5** (1,012)	**29.5** (718)	**16.9** (412)	6.9 (168)	4.2 (102)	0.8 (20)	0.2 (4)	0.0 (1)	0.0 (1)	0.0 (0)	100 (2,438)
Korean households	**9.4** (2,400)	**12.5** (3,199)	**18.8** (4,810)	17.3 (4,421)	25.1 (6,405)	13.2 (3,379)	2.7 (700)	0.8 (198)	0.1 (29)	0.1 (21)	100 (25,562)

This pattern shows that self-assessment by the three poor groups is quite negative, especially compared to self-assessment by Korean households in general.

Since the three poor groups are identified in terms of income and/or deprivation, this confirms that income level or degree of deprivation is closely related to their self-assessment.

Although all three poor groups gave a negative self-assessment, the degree of negativity varies somewhat according to each group. In Table 9.1 above, it can be seen that 76% of the income poor, 81% of the deprivation poor and 88% of the consistently poor see themselves as poor (self-assessment of 1 to 3). These percentages show that the self-assessment by the consistently poor is the most negative, followed by that of the deprivation poor and then the income poor. Figure 9.1 below, which is based on Table 9.1 above, shows the extent of this negativity.

Figure 9.1 Self-assessment by the three poor groups



Line chart based on Table 9.1

Table 9.2 below shows the mean self-assessment by the three poor groups, confirming this conclusion regarding the extent of their negative self-assessment. This table shows that the mean self-assessment by the consistently poor amounts to 2.06, while that of the deprivation poor and the income poor amounts to 2.40 and 2.59, respectively.

Table 9.2 Mean self-assessment by the three poor groups

	Mean self-assessment
The consistently poor	2.06
The deprivation poor	2.40
The income poor	2.59
The total samples	3.92

If we assume that people know their own situation best, this comparison of self-assessment by the three poor groups implies that the possibility of the non-poor

being regarded as poor decreases when deprivation rather than income is used to identify the poor, or both income and deprivation rather than one or other of the two. In other words, in terms of preventing the non-poor from being regarded as poor, deprivation is a better indicator of poverty than income, and the two indicators are better used combined rather than singly. This suggests that the Korean tradition of using only income to identify the poor needs to be reconsidered. As an alternative, the use of both income and deprivation could be considered.

Table 9.3 below shows the number of poor and non-poor households in each self-assessment band from 1 to 10.

Table 9.3 The poor and non-poor

Self-assessment	1	2	3	4	5	6	7	8	9	10	Total
Income poor	56.7 (1,361)	37.3 (1,194)	21.6 (1,039)	11.4 (506)	7.6 (484)	3.6 (123)	2.0 (14)	5.1 (10)	6.9 (2)	4.8 (1)	18.5 (4,734)
Not income poor	43.3 (1,039)	62.7 (2,005)	78.4 (3,771)	88.6 (3,915)	92.4 (5,921)	96.4 (3,256)	98.0 (686)	94.9 (188)	93.1 (27)	95.2 (20)	81.5 (20,828)
Deprivation Poor	59.6 (1,430)	42.9 (1,373)	21.7 (1,043)	10.8 (478)	5.2 (331)	1.8 (61)	1.6 (11)	1.0 (2)	3.4 (1)	9.5 (2)	18.5 (4,732)
Not deprivation poor	40.4 (970)	57.1 (1,826)	78.3 (3,767)	89.2 (3,943)	94.8 (6,074)	98.2 (3,318)	98.4 (689)	99.0 (196)	96.6 (28)	90.5 (19)	81.5 (20,830)
Consistently poor	42.2 (1,012)	22.4 (718)	8.6 (412)	3.8 (168)	1.6 (102)	0.6 (20)	0.6 (4)	0.5 (1)	3.2 (1)	0 (0)	9.5 (2,438)
Not consistently poor	57.8 (1,388)	77.6 (2,481)	91.4 (4,398)	96.2 (4,253)	98.4 (6,303)	99.4 (3,359)	99.4 (696)	99.5 (197)	96.8 (28)	100 (21)	90.5 (23,124)
Total	100.0 (2,400)	100.0 (3,199)	100.0 (4,810)	100.0 (4,421)	100.0 (6,405)	100.0 (3,379)	100.0 (700)	100.0 (198)	100.0 (29)	100.0 (21)	100 (25,562)

It can be seen that 65% of the self-assessed poor who gave self-assessments of 1 to 3 are not identified as income poor, while 63% of the self-assessed poor are not identified as deprivation poor, and 79% of the self-assessed poor are not identified as consistently poor. These percentages suggest the possibility that a number of households that should be identified as poor remain neglected. Furthermore, it can be argued that even if the consistently poor were identified as a poor group, this problem would not be solved because the consistently poor are derived from the income poor and the deprivation poor. So it is highly likely that a number of households experiencing poverty will not be identified as poor when the poor are defined by the use of indicators such as income and/or deprivation. Therefore, we need to make an effort to find and protect the poor who are not identified by these

indicators.

So far, we have compared self-assessment by the three kinds of the poor. This comparison is based on the fact that the three groups are quite different from each other, even though they are all identified as poor. The next section deals with the differences between the three groups, and also considers how people qualify for social assistance, since the way that the Korean government identifies the income poor is closely related to the identification of those eligible for social assistance.

9.2 Comparison of the three kinds of the poor

Table 9.4 below presents the number of households or individuals in each of the three groups of poor. The income poor or deprivation poor amount to 18.5% of households and 15% of individuals, while the consistently poor amount to 9.5% of households and 7.2% of individuals. The percentage of the consistently poor, who are both income poor and deprivation poor, shows that there is only a 50% overlap between the income poor and the deprivation poor, confirming that the poor are identified quite differently according to the use of income and/or deprivation. This finding suggests that in Korea, where the poor are identified by the use of income alone, it is not appropriate to deal only with the income poor in relation to poverty research or poverty policies.

Working on the assumption that the poor are those who experience both low income and deprivation, we can argue that the reality of poverty is doubly exaggerated in Korea when the income poor or the deprivation poor, rather than the consistently poor, are taken to represent "the poor", since the number of income or deprivation poor is double that of the consistently poor.

Table 9.4 Number of income poor, deprivation poor and consistently poor

	%	Projected number of households	Mean household size	Projected number of individuals
The income poor	18.5%	2,874,667	2.43	6,985,440 (14.7%)
The deprivation poor	18.5%	2,874,667	2.45	7,042,934 (14.9%)
The consistently poor	9.5%	1,476,180	2.30	3,395,214 (7.2%)

The Korean government protects recipients of social assistance, who amount to around 5% of households and 3% of individuals, as already seen in Section 6.1.

Comparing these percentages with those of the three poor groups confirms that only a quarter of the income or deprivation poor, or half of the consistently poor receive social assistance. This gap or shortfall means that we can assume that the government defines recipients too rigorously. When the process of identifying recipients is examined, it becomes evident that the government uses such rigorous criteria that it identifies fewer recipients than it should. Three criteria are used to distinguish recipients from the rest of the population: firstly, the official poverty line; secondly, 'recognised income' rather than actual income; thirdly, a personal criterion related to the person supporting the household. The process used to identify recipients is outlined below.

Firstly, the official poverty line and 'recognised income' act as yardsticks in identifying potential recipients. In other words, when a household's 'recognised income' falls below the official poverty line, it is provisionally regarded as a recipient. The 'recognised income' is calculated by adding 'assessed income' to 'converted income from assets'. The 'assessed income' can be expressed by the following equation: 'assessed income' = actual income - 'allowances or expenditures, due to household features' - 'earned income deduction'. The 'allowances or expenditures, due to household features', are made up of 9 items, such as allowances for disability and medical expenditure on the chronically ill.[113] The 'earned income deduction' is applied to four kinds of income, such as the income disabled people earn from participating in the self-support programme.[114] 'Converted income from assets' can be formulated by the following equation: 'converted income from assets' = ('cash value of assets' - 'basic deduction'- 'debts') x 'conversion rate of the cash value of assets into income'. The 'cash value of assets' is derived from a market price.[115] The 'basic deduction', which is a sum of money deducted from 'cash value of assets', amounts to 38,000,000 Korean won (GBP 24,000) for households in big cities, 31,000,00 Korean won (GBP 15,500) for households in medium or small cities and 29,000,000 Korean won (GBP 14,5000) for households in rural areas.[116] The 'conversion rate' is established as 4.17% a month for general assets, 6.26% a month

[113] See A Guide for Securing Basic Living (MOHW, 2005a: 56-57) for details.
[114] See A Guide for Securing Basic Living (MOHW, 2005a: 57-58) for details.
[115] See A Guide for Securing Basic Living (MOHW, 2005a: 72) for details.
[116] See A Guide for Securing Basic Living (MOHW, 2005a: 78) for details.

for financial assets and 100% a month for a car.[117] Thus, we can conclude that 'recognised income' reflecting assets would generally be higher than actual income. This implies that the criterion of 'recognised income' may play a role in preventing some of those identified as income poor by the official poverty line from receiving social assistance.

Secondly, even if a household's 'recognised income' falls below the official poverty line, it will only be eligible for social assistance if personal criteria related to the person supporting the household are satisfied. There are four ways of doing this: first, if there is no-one to support household concerned; second, where the person supporting the household is unable to do so; third, where the person supporting the household is only to do so to a very limited degree; fourth, where the household receives no assistance from the person that would normally support the household even though he/she is able to do so. The supporter is defined as spouse, parents, dependents, son-in-law, daughter, brother living together in the household, sister living together in the household, etc.[118] It has been pointed out that this personal criterion has played an excessive role in making the poor, who should be secured, ineligible to receive assistance (Lee *et al.*, 2002; Lee, 2000). Lee *et al.* (2002) state that this has prevented a number of the poor from being recipients by regarding households that actually receive no support from the supporter as being assisted by the supporter (p. 451). Thus, they conclude that the personal criterion is too rigorous and needs to be revised or loosened in relation to the identification of recipients (p. 451).[119]

In addition, a comparison of the number of income poor and the number of recipients confirms that the two criteria, 'recognised income' and the personal criterion related to the supporter, are strictly established for the identification of recipients. That is, we see that the income poor are defined by the official poverty line, while recipients of social assistance are defined by three criteria: the official

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[117] See A Guide for Securing Basic Living (MOHW, 2005a: 85) for details.

[118] Regarding the qualification of the supporter, see A Guide for Securing Basic Living (MOHW, 2005a:18-27).

[119] Kim (2002) argues that apart from income, other criteria ought to be abandoned, because "all (poor) people have a right to maintain a minimum basic living, which should be protected by the government so all (poor) people need to be identified as social assistance recipients as long as their income is lower than the official poverty line" (p. 131). However, his argument is not reasonable, in that not all the income poor are poor. This is confirmed by this study, which has shown that income is not sufficient in distinguishing the truly poor from the non-poor.

poverty line, 'recognised income' and the personal criterion. This means that the difference in the number of income poor and the number of recipients is due to whether or not the two criteria of 'recognised income' and the personal criterion are applied, because the official poverty line is commonly used to identify both the income poor and recipients. As the number of income poor and the number of recipients amounts to 18.5% and 5% respectively, the 13.5% difference between the two can be said to be the effect of applying the two criteria. The figure of 13.5% means that 73% of the income poor are not defined as recipients when the two criteria are applied. With the current poverty line, we can conclude that these two criteria for identifying recipients are so rigorous that they exclude 73% of the income poor from being recipients. This implies that a number of the poor who should be protected by the government remain neglected. In relation to the identification of recipients, this suggests that qualification of the two criteria may need to be addressed more urgently than the level of the poverty line. Regarding the revision of these two criteria, the personal criterion is of particular interest here because it is related to the topic of this study.[120]

As noted above, this criterion has been criticised for making poor households ineligible for social assistance by regarding them as being supported when they do not actually receive assistance from their supporter. In other words, it does not always reflect the real situation of the poor.

Since deprivation is believed to be a better indicator to reflect the real situation than this personal criterion, we suggest that deprivation can replace the personal criterion currently used to identify recipients. If this were to happen, income, deprivation and assets would be used as the yardsticks to identify recipients.

We will now focus on the values of the 16 variables according to each poor group, and their relationship with self-assessment. As the relationships between the 16 variables and self-assessment were discussed in the previous four chapters, the next section primarily focuses on their values and then compares their relationship with self-assessment.

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[120] The remaining criterion, 'recognised income', should be assessed in terms of whether or not it is appropriate in the identification of recipients. However, this would be outside the range of this study, which addresses self-assessment by the poor, so we will focus on the personal criterion.

9.3 Value of variables and their relationship with self-assessment

9.3.1 Income

Table 9.5 below provides three kinds of data on the income levels of the three poor groups and Korean households in general: 'mean income', '% of mean income in Korean households' and '% of official poverty line'. These three kinds of data are expected to give more detailed information about the income levels of the three groups.

The 'mean income' column shows that the mean income of the income poor and the consistently poor are similar, while the income of the deprivation poor is double that of the other two poor groups. The similarity between the income levels of the income poor and the consistently poor is due to the fact that their identification as poor is partly or entirely based on the official poverty line. As the deprivation poor are identified entirely in terms of deprivation scores, their income levels appear to be much higher than those of the other two poor groups.

Table 9.5 Mean income declared by the four groups

(unit: ,000 Korean won)

	Mean income	% of mean income in Korean households	% (Mean income/ Income poverty line)
The income poor	648 (GBP324)	23.3	57.0
The deprivation poor	1,302 (GBP 651)	46.9	114.6
The consistently poor	618 (GBP 309)	22.3	54.4
Korean households	2,777 (GBP 1,389)	100.0	244.5
The income poverty line	1,136 (GBP 568)		100

The column '% of mean income in Korean households' shows that the income poor and the consistently poor live on around 23% of the average income of Korean households in general. From this we can infer that they live with very low income, as discussed in Chapter 6. The income of the deprivation poor is shown as 47% of that of Korean households in general, which implies that the deprivation poor do not suffer severely low income compared with the income poor and the consistently poor.

In the column, '% (Mean income/Income poverty line)', it is shown that the average income of the income poor or the consistently poor is only half the level set by the poverty line, while the mean income of the deprivation poor is 15% above the

poverty line. These results confirm that the income of the income poor is so low that it is hard for them to maintain even the bare living represented by the poverty line; while it seems that the deprivation poor have sufficient income to maintain basic living conditions.

Thus, we can conclude from this examination of the three groups that the income poor and the consistently poor can clearly be regarded as poor in terms of income, but that it is hard to say that the deprivation poor should be seen as poor in terms of income.

This comparison illustrates two points: firstly, that income and deprivation are disparate indicators, especially in defining the poor; and secondly, that when the poor are defined entirely in terms of deprivation, there is the possibility that households with a high income may be regarded as poor, which could result in the non-poor being identified as poor. This means that using only deprivation to identify the poor would not prevent those not living in poverty from being identified as poor.

Table 9.6 below shows the correlation coefficients for income and self-assessment according to the three poor groups and Korean households in general. All three coefficients demonstrate that the relationship between income and self-assessment is positive. Furthermore, since the coefficients appear as 0.238 for the deprivation poor, 0.173 for the consistently poor and 0.126 for the income poor, it seems that the degree of the relationship differs according to each group. Despite the differences, however, it is seen that self-assessment by the poor is partially correlated with income, particularly in the income poor and the consistently poor. This means that their self-assessment differs even though their income levels are identical to or similar to one another, and that an increase in the income of the poor does not always lead to positive self-assessment. This can be explained by the following two points. One relates to the nature of income as an indicator of poverty. That is, income is not a sufficient indicator in reflecting living conditions. As a result, and assuming that people know their situation best, we can argue that households with the same income level have a different self-assessment of being poor, which results in a partial relationship between self-assessment by the poor and income. The other point is that, as can be inferred from Runciman's argument (1966) that people's feelings of relative deprivation are conditioned by comparing their own situation with the

reference group's situation, self-assessment by the poor may differ according to their reference group. Thus, it can be argued that the relationship between income and self-assessment appears to be weak since income *per se* does not reflect the influence of the reference group on self-assessment.

Table 9.6 Coefficient between income and self-assessment

	Income poor	Deprivation poor	Consistently poor	Korean households
Correlation coefficients	0.126***	0.238***	0.173***	0.413***

*** $p < 0.001$

9.3.2 Deprivation scores

Table 9.7 below shows three kinds of data regarding the deprivation scores for the three poor groups and Korean households in general: 'mean deprivation scores', '% of mean deprivation scores for Korean households' and '% of deprivation poverty line'.

Table 9.7 Mean deprivation scores of the four groups

	Mean deprivation scores	% of mean deprivation scores for Korean households	% (Mean deprivation scores/deprivation poverty line)
The income poor	6.0	200	105
The deprivation poor	8.2	273	143
The consistently poor	8.6	286	151
Korean households	3.0	100	67
The deprivation poverty line	5.708		100

This table shows that the mean deprivation scores of the deprivation poor and the consistently poor are above 8.0, while that of the income poor is established at 6.0. The similarity between the scores of the deprivation poor and the consistently poor is due to the fact that the deprivation poverty line is used to identify these two groups. The deprivation scores of the income poor are set at a relatively low level because they are defined as poor purely in terms of the official poverty line.

The column '% of mean deprivation scores for Korean households' shows that the deprivation poor and the consistently poor are 2.7 to 2.9 times more deprived than Korean households in general, while the income poor are twice as deprived as Korean households in general. This means that the income poor are less deprived

than the deprivation poor or the consistently poor.

In the column, '% (Mean deprivation scores/deprivation poverty line)', it can be seen that the mean deprivation scores of the deprivation poor and the consistently poor are around 1.5 times more than the deprivation poverty line, whilst that of the income poor is close to the deprivation poverty line.

These results allow us to infer that the consistently poor and the deprivation poor can be regarded as poor in terms of deprivation scores, but that we should hesitate to see the income poor as poor in terms of deprivation. This confirms that deprivation is a quite different indicator from income, and suggests that using income alone to identify the poor, as is customary in Korea, may not prevent those who do not live in poverty from being identified as poor.

Therefore, this comparison of the income levels and deprivation scores of the three poor groups suggests that it would be better to use **both** income and deprivation to identify the poor than **either** income or deprivation. In Tables 9.5 and 9.7 above we saw that the mean income of the consistently poor (who are identified using both income and deprivation) is slightly lower than that of the income poor, while their mean deprivation scores are slightly higher than those of the deprivation poor. This shows that using both the income level and the deprivation scores of the consistently poor can satisfactorily distinguish the poor from the rest of the population in terms of both income and deprivation. As a result, when poverty is defined in terms of both income and deprivation rather than in terms of either one of them, we can conclude that the consistently poor constitute an alternative group to the income poor or the deprivation poor.

Table 9.8 below shows the correlation coefficients between the deprivation scores and self-assessment by the three poor groups and Korean households in general. All the coefficients in this table demonstrate that the relationships between deprivation scores and self-assessment are negative. In addition, the strength of the relationship appears to differ considerably according to each group: it is quite strong in the income poor (-0.421) and relatively weak in the other two poor groups (-0.197 in the deprivation poor and -0.155 in the consistently poor).

However, despite these differences, it is seen that self-assessment by the poor is partially correlated with deprivation, particularly in the deprivation poor and the

consistently poor. As discussed in Section 9.3.1, this can be explained by two points. One is that deprivation as an indicator of poverty is not sufficient to reflect income aspects, which are also significantly related to self-assessment. The other is that deprivation *per se* does not fully consider the influence of the reference group on the poor.

Table 9.8 Coefficient between deprivation scores and self-assessment

	Income poor	Deprivation poor	Consistently poor	Korean households
Correlation coefficients	-0.421***	-0.197***	-0.155***	-0.571***

*** $p < 0.001$

9.3.3 Resources

Number of years spent in education by the head of household

Table 9.9 below reveals that the mean number of years spent in education by the head of household amounts to 6.8 for the income poor, 7.1 for the deprivation poor, 5.8 for the consistently poor and 10.6 for Korean households in general. Thus, it can be seen that the heads of poor households spend considerably less time in education than those of Korean households in general, suggesting that there is a close relationship between education and poverty. The consistently poor spend the shortest time in education, and thus have the least opportunity to acquire a good education.

The correlation coefficients confirm that the relationship between the number of years spent in education by the head of household and self-assessment is positive in all three poor groups, as the coefficients are 0.234 for the income poor, 0.166 for the deprivation poor, 0.127 for the consistently poor.

Table 9.9 Mean number of years spent in education by the head of household and its relationship with self-assessment

	Income poor	Deprivation poor	Consistently poor	Korean households
Number of years spent in education by the head of household	6.8	7.1	5.8	10.6
Correlation coefficients	0.234***	0.166***	0.127***	0.401***

*** $p < 0.001$

Work status of the head of household

Table 9.10 below shows the percentage of heads of household in each work status, according to the four groups. By comparing the percentages of the three poor groups with those of Korean households in general, we can see striking differences in the work status of 'permanent employee' and 'other' (e.g. unpaid family workers and students). The percentage of permanent employees in Korean households is much larger than that in the poor groups, whilst the percentage of 'other' is considerably smaller than that of the poor groups. This shows that the poor have great difficulty in finding a permanent occupation.

Looking at the percentage of poor groups in each type of occupation, we can see that there are no large differences between the work status of the income poor and the consistently poor. It appears that the deprivation poor are more active in occupations that help increase their income than the two former groups: 60% of the deprivation poor are permanent employees, employers or self-employed, or temporary employees, compared with 47% of the income poor and 43% of the consistently poor. These differences help explain why the mean income of the deprivation poor is twice that of the income poor or the consistently poor (see Table 9.5 above). However, as these differences are mainly limited to temporary work status, which accounts for 32% of the deprivation poor, 20% of the income poor and 22% of the consistently poor, the deprivation poor do not seem to enjoy much better overall work status than the two other poor groups.

Table 9.10 Work status of head of household

	Income poor	Deprivation poor	Consistently poor	Korean households
Number of years spent in education by the head of household				
- Permanent employee	2.7%	7.9%	2.1%	32.2%
- Employer/self-employed	24.5%	20.1%	18.5%	27.3%
- Temporary status	19.6%	31.8%	22.0%	20.3%
- Unemployed	5.0%	3.7%	4.6%	2.1%
- Others	48.2%	36.5%	52.9%	18.1%

Table 9.11 below presents Cramer's Vs between the head of household's work status and self-assessment. There is little difference in these values, which amount to 0.139 for the income poor and the deprivation poor, and 0.128 for the consistently

poor. This table also shows that the relationships in all these groups are significant.

Table 9.11 Correlation coefficients for self-assessment and work status of the head of household

	Income poor	Deprivation poor	Consistently poor	Korean households
Cramer's V	0.139***	0.139***	0.128***	0.207***

*** $p < 0.001$

Assets

Table 9.12 below presents the mean assets and the correlation coefficients for the assets and self-assessment by the four groups. Firstly, it shows that the mean assets of the income poor amount to 78,191.000 Korean won (GBP 39,096), those of the deprivation poor to 58,730,000 Korean won (GBP29,365), those of the consistently poor to 58,319,000 Korean won (GBP 29,160) and those of Korean households in general to 145,417,000 Korean won (GBP 72,709). This confirms that the mean assets of the three poor groups are much lower than those of Korean households in general. The income poor are found to have the highest mean assets, demonstrating that the use of income alone to identify the poor does not fully reflect their situation, especially considering that assets are as significant as income in determining one's situation. Table 9.12 also shows that the coefficients for the assets and self-assessment by the poor are positive in all relevant groups, and relatively large.

Table 9.12 Mean assets and their relationship with self-assessment

(unit: ,000 Korean won)

	Income poor	Deprivation poor	Consistently poor	Korean households
Mean assets (GBP)	78,191 (39,096)	58,730 (29,365)	58,319 (29,160)	145,417 (72,709)
Correlation coefficients	0.376***	0.294***	0.295***	0.456***

*** $p < 0.001$

Debts

Table 9.13 below shows that the mean debts of the income poor and the consistently poor are considerably lower than those of Korean households in general. Considering that debts generally reflect the severity of a household's situation, this pattern is unusual. It might be explained by the fact that debt can indicate a higher standard of living as well as poor living conditions. Returnable deposits or credit card balances

would be examples of this. The coefficients in Table 9.13 suggest that debts are not a good indicator of difficult situations, as the relationship between debt and self-assessment does not appear to be significant in the three poor groups.

Table 9.13 Mean debts and their relationship with self-assessment

	Income poor	Deprivation poor	Consistently poor	Korean households
Mean debts (GBP)	14,829 (7,415)	19,280 (9,640)	13,862 (317)	21,998 (6,931)
Correlation coefficients	0.042	-0.012	0.032	0.036***

*** $p < 0.001$

9.3.4 Standard of living

Basic deprivation scores

Table 9.14 below presents the mean basic deprivation scores and the correlation coefficients for basic deprivation scores and self-assessment by the four groups.

Table 9.14 Mean basic deprivation scores and their relationship with self-assessment

	Income poor	Deprivation poor	Consistently poor	Korean households
Mean deprivation scores	0.49	0.68	0.77	0.19
Correlation coefficients	-0.314***	-0.252***	-0.244***	-0.333***

*** $p < 0.001$

The fact that the three poor groups have higher mean deprivation scores than Korean households in general shows that they lack basic necessities to a greater degree. The deprivation poor and the consistently poor appear to be more deprived of basic items than the income poor. The fact that the deprivation poor are more deprived of necessities than the income poor, even though their mean income is twice that of the income poor, demonstrates that income is not an accurate indicator of living conditions. Table 9.14 also shows that the coefficients for basic deprivation scores and self-assessment are negative and relatively large.

Expenditure

Table 9.15 below shows that the mean expenditure of the poor is 2 or 3 times less than that of Korean households in general. It is worth noting the mean expenditure of

the deprivation poor, which is the largest of the three poor groups. Bearing in mind that increased expenditure is directly related to a reduction in deprivation, it is surprising to see that the deprivation poor have the highest mean expenditure of the three poor groups. This may be explained by looking at the mean income of the deprivation poor, which is twice that of the income poor and the consistently poor. We can also see that the mean expenditure of the income poor and the consistently poor exceeds their mean income, showing that their income is too low to cover their expenditure. Table 9.15 presents the coefficients for expenditure and self-assessment by the poor groups, which shows that their relationships are positive.

Table 9.15 Mean expenditure and its relationship with self-assessment

	Income poor	Deprivation poor	Consistently poor	Korean households
Mean expenditure (GBP)	811 (406)	914 (457)	634 (317)	1,876 (938)
Correlation coefficients	0.321***	0.282***	0.188***	0.507***

*** $p < 0.001$

9.3.5 General household matters

Number of children in the household

Table 9.16 below shows that there are no significant differences in the mean number of children in the three poor groups. In contrast to this, the mean number of children in Korean households in general appears to be almost twice the mean of the poor groups. This seems to reflect the fact that it is becoming increasingly difficult for poor households in Korea to bring up more than a few children. The relationship between the number of children and self-assessment is seen to be positive in income poor households and Korean households, but does not appear to be significant in the remaining two groups.

Table 9.16 Mean number of children and its relationship with self-assessment

	Income poor	Deprivation poor	Consistently poor	Korean households
Mean of number of children	0.41	0.44	0.39	0.74
Correlation coefficients	0.048***	0.019	0.012	0.162***

*** $p < 0.001$

Gender and age of the head of household, location, marital status of the head of household and lone parents

Table 9.17 below indicates percentages of relevant households in each dummy variable. In the case of the head of household's gender, it is seen that there are fewer poor male-headed households than poor female-headed households. It appears that 81% of Korean households are headed by males, compared with 63% of income poor and deprivation poor households, and 57% of consistently poor households. These percentages show that as households are identified as poorer, the number of male-headed households decreases. The value of Gamma in Table 9.18 below shows that gender of the head of household is significantly related to self-assessment in all four groups.

Table 9.17 Distributions in variables belonging to general household matters

	Income poor	Deprivation poor	Consistently poor	Korean households
Head of household's gender				
- male	63%	63%	57%	81%
- female	37%	37%	43%	19%
Head of household's age				
- < 30	2.3%	3.7%	2%	5.9%
- 30-39	10.7%	12.3%	9%	24.3%
- 40-49	18.6%	21.2%	18.3%	27.3%
- 50-64	24.6%	30.1%	24.1%	26.3%
- 65+	43.8%	32.7%	46.6%	16.2%
Location				
- Big cities	35.1%	39.3%	35.5%	44%
- Medium or small cities	42.9%	43.2%	43.4%	43.7%
- Rural areas	22.0%	17.5%	21.1%	12.3%
Head of household's marital status				
- Married	55.3%	49.6%	46.5%	73.7%
- Single	5.3%	9.2%	6.4%	8%
- Separated/divorced/widowed	39.4%	41.2%	47.1%	18.3%
Lone parents				
- Neither single mother/father	96.0%	95.2%	95.3%	97.7%
- Single mother	3.1%	3.3%	3.4%	1.7%
- Single father	0.9%	1.5%	1.3%	0.6%

Table 9.18 Correlation coefficients for self-assessment and variables in general household matters

	Income poor	Deprivation poor	Consistently poor	Korean households
Head of household's gender: male	-0.301***	-0.221***	-0.212***	-0.425***
Head of household's age	-0.088***	-0.116***	-0.023	-0.204***
Location	0.032	-0.006	0.050	-0.074***
Head of household's marital status	-0.366***	-0.272***	-0.278***	-0.436***
Lone parents	-0.268***	-0.255***	-0.198	-0.457***

*** $p < 0.001$

Regarding the head of household's age, there is a striking difference between the pattern of Korean households in general and that of the poor groups. The number of Korean households in general increases as the head of household's age rises, peaking at the level where the head is aged 40-49, and then decreasing. In contrast to this, the number of households in three poor groups increases steadily as the head of household's age increases, confirming that poverty is more problematic in households with an older head. Noting that 47% of consistently poor households, 44% of income poor households and 33% of deprivation poor households are headed by someone aged 65 or over, we can infer that poverty is more prevalent in households with older heads than in those where the head is younger. Nonetheless, Table 9.18 shows that age of the head of consistently poor households is not related to their self-assessment.

In relation to the variable of location, Table 9.17 shows a higher percentage of poor groups than Korean households in general in rural areas, and a lower percentage of poor groups than Korean households in big cities. There is little difference in the percentages for medium or small cities. This implies that the great efforts made to reduce poverty in rural areas of Korea have not been entirely successful. Within each poor group, the percentages do not differ very much according to their location, and the Gamma values in Table 9.18 show that location is only significantly related to the self-assessment by Korean households.

With regard to the head of household's marital status, it is seen that Korean households in general have more married heads and fewer separated/divorced/widowed heads than the poor groups, who appear to be more affected by marital problems. A similar trend can be observed among the poor groups, as 47.1% of the heads of consistently poor households are separated/divorced/widowed, compared with 39.4% of the income poor and 41.2% of the deprivation poor. Table 9.18 shows that the marital status of the head is related to a household's self-assessment.

The percentages related to the variable of lone parents show that, compared with Korean households in general, twice as many poor households are headed by single parents. This reflects the general finding that households with single parents

are more exposed to poverty. However, there do not seem to be any significant differences between the three poor groups with regard to the percentage of households headed by single parents. Table 9.18 demonstrates that the status of a single mother or single father has a significant relationship with the self-assessments of the income poor and the deprivation poor, and of Korean households in general.

Number of disabled people

Table 9.19 below shows that there are no large differences between the mean numbers of disabled people in the poor groups, although the mean numbers in the poor groups are higher than the mean number in Korean households. The relationship between the number of disabled people and self-assessment appears to be negative, except for the consistently poor, where it is not significant.

Table 9.19 Mean number of disabled people and its relationship with self-assessment

	Income poor	Deprivation poor	Consistently poor	Korean households
Mean of number of disabled	0.22	0.21	0.26	0.11
Correlation coefficients	-0.101***	-0.078***	-0.052	-0.131***

*** $p < 0.001$

Number of chronically ill people

The pattern of the mean number of chronically ill people in the four groups is very similar to that for disabled people. There are no significant differences between the poor groups, although their mean numbers are higher than the mean number in Korean households in general. The coefficients show that the relationship between the number of chronically ill people in income poor and deprivation poor households is negative, and that it does not appear to be significant in consistently poor households.

Table 9.20 Mean number of chronically ill people and its relationship with self-assessment

	Income poor	Deprivation poor	Consistently poor	Korean households
Mean number of chronically ill people	0.89	0.84	0.97	0.53
Correlation coefficients	-0.068***	-0.055***	0.004	-0.181***

*** $p < 0.001$

So far, we have discussed the features of the 16 variables according to the three poor groups and Korean households in general, and compared their relationships with self-assessment. These comparisons have clearly shown that poor groups suffer more poverty than Korean households in general, and have further confirmed that the consistently poor are more deeply trapped in poverty than the income poor or the deprivation poor. However, it is not obvious whether the income poor or the deprivation poor suffer more poverty, since some variables, such as income or expenditure, suggest that the income poor live in more severe situations than the deprivation poor, while other variables, such as deprivation or assets, show that the deprivation poor live in harsher conditions that the income poor. These results show that, as indicators, income and deprivation refer to different aspects of poverty; and that when we take the position that poverty should be measured by both income and deprivation, the consistently poor can constitute an alternative poor group to the income poor and the deprivation poor.

9.4 Impact of variables on self-assessment

Table 9.21 below compares the explanatory powers and regression coefficients obtained from Model VI in each of the four groups, where all relevant variables are included. In this section, these powers and coefficients are used to compare the impact of the variables on self-assessment by the poor and Korean households, and the implications for poverty policies are identified and discussed.

It is seen that the explanatory powers decrease as we move from Korean households to the income poor, then the deprivation poor and finally to the consistently poor. This shows the decreasing ability of the 16 variables to explain self-assessment by the poor. However, as the poor groups are identified in terms of income **or** deprivation or income **and** deprivation, we can infer that this decline is explained by their low income and/or greater deprivation, as discussed in Section 8.5.1. In addition, the remaining percentage that is not explained by the variables in Model VI in each four groups would be better explained when we consider the following points: the influence of the reference group, other important variables such as the dynamics of change in living conditions, political perceptions, religion and individual expectations.

Table 9.21 Comparison of the results of multiple regression in the four groups

Factors/Variables	Korean households	Income poor	Deprivation poor	Consistently poor
Income (natural log)	0.098	0.053	0.104	0.117
Deprivation scores	-0.270	-0.212	-	-
Resources				
Years spent in education by the head	0.083	0.125	0.073	0.105
Work status of the head				
- (Permanent employee)				
- Employer/ Self-employed	-	0.094	0.082	0.129
- Temporary employee	-0.071	-	-	-
- Unemployed	-	-	-	-
- Other	-	-	-	-
Assets (natural log)	0.160	0.182	0.174	0.202
Debts		N/A	N/A	N/A
Standard of living				
Basic deprivation scores	-0.078	-0.159	-0.192	-0.205
Expenditure (natural log)	0.154	0.136	0.144	0.062
General household matters				
Number of children	-	-	N/A	N/A
Gender of the head: male	-	-	-	-
Age of the head				
- (65+)				N/A
- < 30	0.033	-	0.089	N/A
- 30-39	-	-0.068	-	N/A
- 40-49	-0.032	-0.084	-	N/A
- 50-64	-	-	-	N/A
Location				
- (Big cities)		N/A	N/A	N/A
- Medium or small cities	-	N/A	N/A	N/A
- Rural areas	0.042	N/A	N/A	N/A
Marital status of the head				
- (Married)				
- Single	-	-	-	-
- Separated/divorced/ widowed	-	-	-0.077	-
Lone parents				
- (Neither single father nor mother)				N/A
- Single mother	-0.022	-	-	N/A
- Single father	-	-	-	N/A
Number of disabled people	-0.036	-0.068	-0.082	N/A
Number of chronically ill people	-	-	-	N/A
Adjusted R^2	0.423	0.312	0.208	0.177
F	1542.262***	214.044***	154.227***	88.018***

*** $p < 0.001$. NB. All the standardised regression coefficients in this table are significant at the level of 0.001.

Table 9.21 above shows the regression coefficient of each variable for all four groups. The four variables worth noting in Korean households are deprivation (β= -0.270), assets (0.160), expenditure (β= 0.154) and income (β= 0.098), which appear to have a relatively strong impact on self-assessment by Korean households compared with other variables. Assuming that the self-assessments by Korean households reflect their situation, the relatively strong impact of these variables on self-assessment shows that income, deprivation, assets and expenditure are more closely related to poverty in households than any other variable. This implies that the four variables reflect the poverty situation in Korean households better than any other variable. Therefore, it is desirable to consider these four variables in identifying the poor (see Section 10.2.2.2).

Regarding the coefficients of the poor groups, the variable of basic deprivation scores is particularly worth discussing. The extent of the influence of basic deprivation scores is relatively strong in the poor groups. Compared with the extent of the influence of basic deprivation scores in Korean households (β= -0.078), the extent of the variable in the poor groups (β= -0.159 in the income poor, β= -0.192 in the deprivation poor and β= -0.205 in the consistently poor) is quite strong. Furthermore, the extent of the impact of the variable of basic deprivation scores is strongest among the deprivation poor and the consistently poor. This reveals that basic deprivation is still a problem for poor groups. As a result, this allows us to suggest that there is an urgent need for the government to introduce poverty policies that focus on securing basic living conditions for the poor.

Analysis shows that the variable of assets has a relatively strong impact on self-assessment by the poor (β= 0.182 in the income poor, β= 0.174 in the deprivation poor and β= 0.202 in the consistently poor). Thus, we can infer that an increase in assets would help improve self-assessment by poor groups. However, since an increase in assets ultimately relies on households having sufficient income to save or invest a surplus, increasing assets can be said to require long-term rather than short-term policies. In this regard, the coefficients of the variables of the number of years spent in education by the head of household and the head of household's work status in poor groups imply that there might be a significant role for education and occupation in long-term policies.

The extent of the impact of income on poor groups shows that increasing income would be more effective among the consistently poor (β= 0.117) and the deprivation poor (β= 0.104) than the income poor (β= 0.053). In contrast to this, the influence of the variable of deprivation scores demonstrates that reduced deprivation is more closely related to more positive self-assessment by the income poor (β= -0.212) than by the deprivation poor (not significant) or the consistently poor (not significant). In the variable of expenditure, it is shown that an increase in expenditure would be more effective among the deprivation poor (β= 0.182) and the income poor (β= 0.136) than among the consistently poor (β= 0.062). The different effects of these variables according to the poor groups suggest that policies need to be refined according to their target groups.

The variables related to general household matters show a very weak impact on self-assessment. This implies that improving income aspects or deprivation aspects could compensate for adversity due to general household features. Therefore, excessive benefits based solely on general household features would reduce the effectiveness of policies in relation to self-assessment by the poor.

9.5 Conclusion

Chapter 9 has compared the results obtained from the previous four chapters. The comparison of self-assessments by the poor showed that the consistently poor have the most negative self-perception. As this study confirmed the possibility that there are a number of households among the income poor and the deprivation poor that are not poor, it has been argued that the consistently poor can be considered as an alternative poor group to the income poor or the deprivation poor. However, because the consistently poor are derived from the income poor and the deprivation poor, using the consistently poor as an alternative group does not resolve the problem that a number of households that should be defined as poor are not defined as such when either income or deprivation is used to identify the poor.

Regarding the identification of these three poor groups, it was confirmed that, since the number of income poor or deprivation poor was set at 18.5% and the number of consistently poor was set at 9.5%, using both income and deprivation to identify the poor would result in fewer households being identified as poor than

using either income or deprivation to identify them. Furthermore, the reduction in the number of those identified as poor depending on the indicator used, shows that income and deprivation are quite different indicators.

With 5% of households receiving social assistance, establishing the number of consistently poor as 9.5% also raised the question of whether the process used to identify recipients of social assistance is too rigorous. Examination of this process revealed that two criteria used to identify recipients – recognised income and personal criterion related to the person supporting the household – may have played a role in preventing 73% of the income poor from receiving social assistance. In addition, it has been pointed out that the personal criterion does not accurately reflect the difficult circumstances experienced by the poor. Therefore, it was suggested that this criterion can be replaced with deprivation, an indicator that refers directly to living standards.

A comparison of the values of the 16 variables according to the three poor groups and Korean households in general, and the investigation into the relationships between self-assessment and the 16 variables confirmed that the consistently poor experience the most severe poverty of the three poor groups, and that the income poor are a quite different group from the deprivation poor.

In relation to poverty policies, the investigation into the extent of the influence of each variable on each of the four groups found that, first, the four variables of income, deprivation, assets and expenditure have a striking impact on self-assessment by Korean households; second, that all three poor groups suffer basic deprivation, meaning that the government needs to work on securing basic living conditions for the poor; and third, that as the extent of the impact of the variables differs somewhat according to each group of poor, poverty policies need to be refined according to their target group in order to make them more effective.

CHAPTER 10. CONCLUSION

This chapter summarises this study, discusses its limitations and makes some suggestions for further research. Section 10.1 summarises the methods used in this study to explore self-assessment by the poor. Section 10.2 deals with the results of the analysis made in this study and the implications for poverty policies in Korea. Section 10.3 presents the limitations of this study and some suggestions for further research.

10.1 Summarisation of the methods used in this study

10.1.1 Data set and measuring self-assessment

This study used the 2004 official government data set, which was obtained from the 2004 official survey designed to establish the 2005 official poverty line. As the data set was scheduled to have the latest and largest amount of information about the living conditions of Korean households, I had intended to use it for this study. However, for my purposes, it presented a crucial problem in that it did not aim to measure self-assessment by Korean households, which included poor households. If the data set had no information on their self-assessment, it meant that it was not useful for this study. So it was essential that the data set included information about self-assessment by households. I thought that it would be best if I devised some questions to insert into the original official survey questionnaire, partly because it seemed that I could design more appropriate questions for my study than anyone else, and partly because Korean academia or the Korean government was not interested in measuring self-assessment and therefore had no idea how to create questions for this purpose.

I contacted the person in charge of the survey to ask whether some questions could be included in the official survey questionnaire, and received a positive response. I created 14 questions directly or indirectly related to measuring self-assessment and sent them to him. However, because there was little room in the questionnaire, only one of the 14 questions, which was designed to measure self-assessment on a 10-point scale, was inserted into the official survey questionnaire.

This is shown below.

Q1. Please tick an appropriate score that indicates your household's economic situation?

Very poor									Very well off
1	2	3	4	5	6	7	8	9	10

Despite this setback I thought that the data set could be used for this study, as this question was the most important one for measuring self-assessment. However, as there was no obvious way of picking up which scores refer to a poor, a middle or a well off position, which is necessary for this study, I was obliged to interpret the scores of 2 to 9 in Q1, for which there was no explicit wording. As this study is particularly interested in whether or not those who are poor in terms of income and/or deprivation think of themselves as poor, the interpretation focused on which score was critical in distinguishing a poor position from a non-poor position.

The interpretation was made by referring to the instructions for Q1, interviewing two investigators who participated in the survey and considering the KNSO data about self-assessment by Korean households regarding their class. As a result, self-assessments of 1 to 3 were interpreted as referring to a perception of being poor. As the KNSO data clearly showed that self-assessments of 1 to 3 referred to a lower position on the scale, this interpretation of the scores of 1 to 3 seemed quite reasonable. The interpretation of all the scores between 1 and 10 in Q1 can be seen in Table 10.1 below.

Table 10.1 Meaning of each self-assessment score

Self-Assessment	1	2	3	4	5	6	7	8	9	10
Self-Assessment	Very poor	Fairly poor	Slightly poor	Low-middle position	Middle position	Upper-middle position	Well off	Slightly more well off	Fairly well off	Very well off

The survey whose questionnaire included Q1 was carried out on 30,000 households in 2004, and the data of 25,757 households were collected. Since the income data of 195 of these households were not recorded, this study used data on 25,562 households.

10.1.2 Identifying the income poor, the deprivation poor and the consistently poor

In order to identify the income poor, whose income falls below a certain income level, this study used the 2005 official poverty line, which was based on the data set employed in this study. It was calculated that the income poor amount to 18.5% of all households in the data set. Following Halleröd's method (1995b), where the number of deprivation poor is set at the number of income poor, the number of deprivation poor was set at 18.5%. The consistently poor, who are defined as those who are both income poor and deprivation poor, appear to amount to 9.5% of all households in the data set.

10.1.3 Establishing variables

This study used 16 variables to explore what has an impact on self-assessment. Given the constraint that they had to be selected on the basis of information contained in the official data set, the 16 variables were set up with the reference to Ferge (2000) and works by Korean researchers such as Kim (1990), Lee *et al.* (1991) and Kim and Son (2002). Then, in accordance with the indicators used to identify the poor in this study, the 16 variables were classified into five factors: income, deprivation, resources, standard of living and general household matters. The factor of income and deprivation has one variable: income and deprivation scores, respectively. The factor of resources is made up of the variables of the number of years spent in education by the head of household, work status of the head of household, assets and debts. The factor of standard of living includes the variables of basic deprivation scores and expenditure. Finally, the factor of general household matters consists of the variables of number of children, gender of the head of household, age of the head of household, location, marital status of the head of household, lone parents, number of disabled people and number of chronically ill people.

10.2 The findings and their implications for poverty policies in Korea

10.2.1 Identifying the poor: the consistently poor as an alternative group

Since Korean society has traditionally regarded those whose income is lower than an income poverty line as poor, an income poverty line has to be established in order to identify the poor in Korea. Therefore, a great deal of attention has been paid to the level at which the Korean government establishes the official poverty line, which is particularly significant in that it officially shows the reality of poverty in Korea.

However, the problem with using income as the sole indicator to identify the poor is that people who have a good quality of life might be identified as poor if their income is lower than a poverty line. It would not be reasonable to see those who have a low income but enjoy good quality of life as poor. In this regard, we can say that the non-poor might be regarded as poor when the poor are identified using income alone.

By identifying the poor using income and/or deprivation, this study has confirmed that 50% of the income poor are not poor in terms of deprivation, and vice versa. As Ringen (1988) argues, this suggests that both income and deprivation, rather than income alone, should be used to identify those living in poverty as poor. In Korea, where only the income poor are regarded as poor, this allows us to argue that it would be better if the consistently poor, who are both income poor and deprivation poor, constituted an alternative poor group to the income poor. This argument can be realistically and easily put into practice under the current system used by the Korean government, which has measured deprivation since 1999 as well as income. Bearing in mind that this study uses the official data set, it is clear that the government already has a data set that can be used to identify the consistently poor.

Furthermore, the government's method of identifying recipients of social assistance can be improved if the consistently poor are used as an alternative poor group. The government currently uses three criteria to identify recipients: income, assets and a personal criterion related to the person supporting the household. The personal criterion has been criticised on the grounds that it is unreasonable to prevent large numbers of the poor from receiving social assistance, and recently the government has attempted to alleviate the personal criterion regarding the ability of the supporter.[121] Nonetheless, these complementary measures will not resolve the

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http://news.empas.com/show.tsp/cp_jo/20060215n00902/?kw=%BA%CE%BE%E7%20%3Cb%3E%26%3C%2Fb%3E%20%C0%C7%B9%AB%C0%DA%20%3Cb%3E%26%3C%2Fb%3E%20%B1%

underlying problem with the personal yardstick because of its limited ability to reflect the real situation. In order to correct this, the introduction of an alternative criterion needs to be considered, rather than resorting to a temporary amendment of the personal criterion. As the personal criterion aims to distinguish recipients from poor groups where there is someone supporting the household, it can be said that this criterion ultimately aims to separate those who are poor from those who are not. In terms of the function to refer to one's real condition, we can argue that deprivation may be better than the personal criterion, because it refers directly to their living conditions. In this regard, this study argues that deprivation might be an alternative to the personal criterion used to identify recipients.

Replacing the personal criterion with deprivation would mean using income, deprivation and assets as yardsticks to identify recipients. Thus, using the consistently poor as an alternative poor group, with assets as an additional criterion, would enable the government to identify recipients from the consistently poor rather than employing a complicated process involving their assets and the personal criterion to select them from the income poor.

Therefore, this study suggests that there is a need to discuss identification of the consistently poor as an alternative poor group to the income poor. This is because using both income and deprivation gives a better picture of the real situation than using income alone, and deprivation is better at reflecting the real living conditions than the personal criterion.

10.2.2 Exploring self-assessment by the poor

10.2.2.1 Self-assessment is quite different from objective poverty status

Through the investigation into self-assessment and the identification of the poor, this study has confirmed that people's self-assessment is quite different from their poverty status determined by income and/or deprivation as objective indicators.

Firstly, this study confirmed that 24% of the income poor, 19% of the deprivation poor and 12% of the consistently poor do not regard themselves as poor. Bearing in mind that the income and deprivation poverty lines are set at a low level,

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E2%C1%D8%20%3Cb%3E%26%3C%2Fb%3E

it is hard to argue that this is a minor inconsistency, particularly in the case of the income poor and the deprivation poor. In fact, it raises the possibility that there may be a number of non-poor households among households that are identified as income poor or deprivation poor, implying that the consistently poor, rather than the income poor or deprivation poor, would be the best poor group to be targeted by the government. In the Korean situation, where the income poor have traditionally been regarded as 'the poor', this also supports the argument that the consistently poor should be identified as an alternative poor group to the income poor or the deprivation poor.

Secondly, of the households with the lowest self-assessment of 1, which refers to 'very poor', 43% are not identified as income poor, 40% are not defined as deprivation poor, and 26% do not belong to either the income poor or the deprivation poor. Out of the households with a self-assessment of 2, referring to 'fairly poor', 63% are not defined as income poor, 56% are not identified as deprivation poor, and 42% are not defined as either the income poor or the deprivation poor. This inconsistency increases to 78%, 87% and 65%, respectively when the percentages are derived from households with a self-assessment of 3, referring to 'slightly poor'.

When the self-assessed poor (those who gave self-assessments of 1 to 3) are used to capture this inconsistency, 65% of them do not appear to belong to the income poor, 63% are not assessed as deprivation poor, and 49% do not show up in either group. Given that people's self-assessment reflects their situation, the finding that the categories of income poor and deprivation poor do not cover such a large percentage of the self-assessed poor suggests that there are a number of households that are not identified as poor in terms of income and/or deprivation, but which nevertheless are living in poverty. This means that if the government continues to identify the poor using income and/or deprivation, it will constantly need to find and secure the poor households that are not captured by investigations into income and/or deprivation.

10.2.2.2 Extent of impact of the variables on self-assessment

This study employed 16 variables to examine what has an impact on self-assessment. The results of regression of the variables are summarised in Table 10.2 below, in

order of the relative extent of the impact of the variables on self-assessment. Since the variables impacting on self-assessment are derived from information given by the poor as well as by Korean households in general, the results in Table 10.2 can be said to directly reflect the opinion of the population. In this regard, the results will be of especial significance in the political arena.

Table 10.2 Variables impacting on self-assessment

	Korean households	Income poor	Deprivation poor	Consistently poor
1	Deprivation score (100%)	Deprivation score (100%)	Basic deprivation score (100%)	Basic deprivation score (100%)
2	Assets (59%)	Assets (86%)	Assets (91%)	Assets (99%)
3	Expenditure (57%)	Basic deprivation scores (75%)	Expenditure (75%)	Employer or self-employed (63%)
4	Income (36%)	Expenditure (64%)	Income (54%)	Income (57%)
5	Number of years spent in education by the head of household (31%)	Number of years spent in education by the head of household (59%)	Head aged below 30 (46%)	Number of years spent in education by the head of household (51%)
6	Basic deprivation scores (28%)	Employer or self-employed (44%)	Employer or self-employed (43%)	Expenditure (30%)
7	Temporary employee (26%)	Head aged between 40-49 (40%)	Number of disabled people (43%)	
8	Rural areas (16%)	Number of disabled people (32%)	Separated/divorced /widowed (40%)	
9	Number of disabled people (13%)	Head aged between 30-39 (32%)	Number of years spent in education by the head of household (38%)	
10	Head aged below 30 (12%)	Income (25%)		
11	Head aged between 40-49 (12%)			

NB. Percentage of the variables is calculated by reference to the variable located in each first row.

In all the three poor groups it is seen that variables related to income aspects or deprivation aspects have a greater impact than variables related to the factor of general household matters. Therefore, it is inferred that when a household's income aspects or deprivation aspects improve, this will counteract a negative self-assessment due to general household matters such as age and disability. The weak impact of the variables for general household matters also suggests that policies that are based on general household matters and do not consider income and deprivation

aspects of households would not be very effective.

Among the variables related to income aspects or deprivation aspects, the variables of basic deprivation scores and assets are worth noting, as it appears to have a significant impact on self-assessment in all three poor groups. Firstly, the significant impact of basic deprivation scores on self-assessment by the poor implies that being deprived of basic items is still a major problem for the poor. As basic items include meals, electricity, telephone, water, heating and treatment, deprivation of such items allows us to infer that the poor live in extremely harsh conditions. This suggests that the government urgently needs to help the severely deprived improve their basic living conditions.

Secondly, it is seen that the variable of assets has the second greatest impact on self-assessment. Therefore, it is inferred that an effective way of improving self-assessment by poor groups would be to increase their assets. However, the problem lies in how the poor can improve their assets. It is hard to see how they can do this in a short time, which suggests that a long-term policy needs to be established to improve their assets.

Although the variables related to income aspects or deprivation aspects appear to have a significant impact on self-assessment, the degree of the impact varies according to the poor groups as seen in Table 10.2. Therefore, in order to establish effective policies, the focus of policies needs to be adapted according to each group.

In relation to identifying recipients of social assistance, self-assessment by the Korean people supports the argument that there is a need to replace the personal criterion, which is used for identifying recipients of social assistance, with deprivation. We see in Table 10.2 above that the four variables of income, deprivation, assets and expenditure play an important role in the self-assessment by Korean households. Therefore, if we can assume that people know their situation best, we can argue that in order to identify households that are poor, the four variables need to be considered together if possible (see Section 9.4). If deprivation is used, expenditure can be omitted from the four variables, since deprivation covers more comprehensive areas of poverty than expenditure (Mack & Lansley, 1985). Income and deprivation should be used together, as this study has confirmed, partly because income is quite a different indicator from deprivation, and partly because it is better

to use both of them to identify the poor than to use one or other of them. When the poor need to be more rigorously identified, particularly in relation to the means test, it can be accepted that assets should be employed to identify the poor. Thus, this shows that the three variables of income, assets and deprivation can play a crucial role in identifying the poor. In the Korean situation, where income, assets and the personal criterion are employed together to identify recipients of social assistance, the argument for the need to use income, assets and deprivation seems particularly meaningful with regard to the elements used to identify recipients. This study has suggested that we can consider replacing the personal criterion with deprivation. This would mean that the elements for the identification of recipients would be income, assets and deprivation: the same three variables as those derived from self-assessment by Korean households to identify the poor. Thus, we can conclude that from the viewpoint of self-assessment, it is also worth considering replacing the personal criterion with deprivation in order to identify who should receive social assistance.

10.3 Limitations of the study and suggestions for further research

This study has certain limitations. Firstly, it could be argued that it has a limitation in relation to measuring self-assessment by Korean households, in that the meaning of the scores of 2 to 9 in Q1 is dependent on my interpretation. Subsequent studies can consider more questions to measure self-assessment. For this, I suggest that the next official or independent researcher's survey can use the two questions shown below, along with the Q1 used in this study.

Suggested Q1. How would you describe your household?
(1) Poor (2) Somewhere in between (3) Well off
Suggested Q2. Do you think you are poor to the extent that the government should protect you?
(1) Yes (2) No (3) Don't know

'Suggested Q1' is identical to Q2, which I devised to measure self-assessment of poverty, but which was edited out of the 2004 official survey questionnaire. While the Q1 used in this study is suitable for measuring self-assessment on a large scale, 'Suggested Q1' is suitable for estimating self-assessment of being poor. Thus, using these two questions will enable us to explore self-assessment by the poor without having to interpret the meaning given to each of the scores in the Q1 used in this

study.

While I think that it would be better to use Q1, which has no specific descriptors for scores of 2 to 9, than a question that has specific descriptors for all scores, because the former can elicit public perceptions of being poor without the stigma of respondents having explicitly to state their poverty status, it can be argued that Q1 needs to have obvious descriptors for all scores to validate the respondents' idea of their situation. This argument is especially meaningful when only Q1 without obvious descriptors is used and other complementary questions such as 'Suggested Q1' are not employed, since when only Q1 is used, it is hard to pick up a critical point by which households that see themselves as poor are distinguished. Thus, in the next surveys, when we use only Q1 to measure self-assessment by the poor, I think that respondents need to be given the descriptors for all scores. In this case, to clearly convey the meaning of each score to respondents, it would be better to use a question with smaller scales than a 10-point scale, such as a 5-point scale.

'Suggested Q2' will be useful in measuring self-assessment referring to the minimum level the government needs to secure. As this question is directly related to the condition that the government should protect, it is expected that it can give valid information on issues related to social assistance recipients.

Furthermore, in relation to questions that will be helpful in measuring self-assessment, I suggest that 14 questions (see Appendix 3) should be considered in the next survey. In particular, the questions dealing with measuring self-assessment in terms of income and deprivation (such as Q5, Q6, Q10 and Q11 in Appendix 3) will be helpful in comparing and obtaining the differences between self-assessments in terms of income and deprivation.

Another limitation of this study relates to establishing which variables are believed to have an impact on self-assessment by the poor. Certain variables that have been argued to have a significant impact on self-assessment, such as dynamic living conditions, can be included in subsequent studies. In relation to the dynamics of poverty, it would be also desirable to introduce a series of regular official surveys on the same households; i.e. a panel survey.

This study has raised several valid points, which may be considered in further research. Firstly, the finding that a number of the self-assessed poor are not identified

as poor implies that a number of people who should be protected by the government are not. Since it is impossible to measure, find and protect these people while the poor are identified by indicators that cannot fully reflect their situation, there is a need for further research to investigate the poor who are not identified by these indicators. A study dealing with this issue would be also of interest in showing why certain people think of themselves as poor despite their relatively high income or relatively low level of deprivation.

Secondly, this study challenges the tradition of using income to identify the poor in Korea. Having confirmed that the European poverty concept using income and/or deprivation can be extended to the Korean situation, and therefore possibly to the Asian context, this study clearly shows that the deprivation poor and the consistently poor, together with the income poor, need to be discussed in the Korean context. In addition, this study has confirmed that income is not better at identifying those living in real poverty as poor than deprivation or income and deprivation, supporting the argument that deprivation should be measured and used to identify the poor as well as income. This is a critical challenge to the concept of poverty in Korea, where the income poor have conventionally been regarded as 'the poor'. Given the small amount of research presented that deals with deprivation in Korea, I hope that this study will contribute to the lively debates in academia regarding the measurement of deprivation. When the debates on deprivation in Korea take off, we can expect that this may provide an opportunity to show how different the Korean situation – as a proxy for the East Asian context – is from European situation in terms of deprivation.

Thirdly, this study has shown the need for a detailed examination of the criteria used to identify recipients of social assistance: an official poverty line, recognised income and the personal criterion. In particular, this study has argued that the personal criterion can be replaced with deprivation, which would constitute a fundamental change in the method and criteria used to identify recipients. A change of this magnitude would require considerable debate in academia as well as within the government.

Given the increasingly important role that popular opinion now plays in policy-making by the Korean government, there is an obvious need to investigate

people's views on poverty. This makes it more likely that the suggestions made in this study will be accepted by the government and considered in forthcoming surveys, especially as the 2004 official survey began to measure self-assessment by the poor at my request. Having shown that there is a need to explore self-assessment by the poor, it is to be hoped that the information gathered on the basis of the suggestions made in this study may have a significant impact in political arena.

In light of the changes in social security in the United Kingdom, where there has been a shift "from social insurance towards a mixture of social assistance, occupational or private insurance and tax credits" (Adler, 2004: 103), it seems reasonable to assume that future policy-making in Korea will consider a wider variety and mixture of poverty alleviation methods. I hope that this study can help the government devise more desirable and appropriate ways of doing so. Furthermore, in the next few years we can expect even more research and debate on self-assessment by the poor, emphasising empirical application at international and local levels. It is my hope that the present thesis will contribute to these debates.

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APPENDICES

Appendix 1. Questionnaire for the 2004 official survey

Information obtained from this survey is handled confidentially according to Article 8 of Statistical Law

Institute: Korea Institute for Health and Social Affairs

Approved Number
33104

2004 Investigation into national living conditions

No. of investigation				No. of residence		No. of household		Survey No. (after investigation)		
Cluster			Area							

Address	

1st Visit	Month___ Day___ Hour ___ Minute___	**Result of Visit**	□Finished □Not finished (Reason:)	**Name of Interviewer**	
2nd Visit	Month___ Day___ Hour ___ Minute___	**Result of Visit**	□Finished □Not finished (Reason:)	**Name of Interviewer**	
3rd Visit	Month___ Day___ Hour ___ Minute___	**Result of Visit**	□Finished □Not finished (Reason:)	**Name of Interviewer**	

Name of the head of household		**Name of respondent**		**Relationship between head of household and respondent**		**Telephone number**	

Supervisor's authorisation	□Finished □Not finished (Reason:)	**Name of investigator**	(signature)	**Name of Supervisor**	(signature)

Ministry of Health and Welfare in Korea
Korea Institute for Health and Social Affairs

I. Questions on general household matters

Number of household members											
Relationship with head of household		Sex	Age	Living arrangements	Marital status	Education		Work status	Disability	Chronic illness
(1) Head of household (2) Spouse (3) Dependent (4) Spouse of dependent (5) Parent (6) Parent in law (7) Grandchild (8)Spouse of grandchild (9) Grandparent (10) Grandparent in law (11) Brother or sister (12) Brother or sister in law (13) Spouse of brother or sister (14) Spouse of brother or sister in law (15) Other relative (16) Co-habitee		(1) Male (2) Female		(1) Together (2) Separated	(1) Married (2) Widowed (3) Divorced (4) Separated (5) Single (6) Not applicable	(1) Not applicable (2) Illiteracy (3) Elementary school (4) Middle school (5) High school (6) 2-year college course (7) University (7) Graduate school	(1) At school/ on leave of absence (2) Dropped out of school/completed courses (3) Graduated	(0) Not applicable (under the age of 14) (1) Permanent employee (2) Temporary employee with a 1-12 month contract of employment (3) Temporary employee with less than 1 month of work (4) Temporary employee in the public sector (5) Employer (6) Self-employed (7) Unpaid worker (8) Unemployed (9) None of the above	(1) Level 1 (2) Level 2 (3) Level 3 (4) Level 4 (5) Level 5 (6) Level 6 (7) Unregistered disabled person	(0) Not applicable (1) Undergoing treatment for less than 3 months (2) Undergoing treatment for 3-6 months (3) Undergoing treatment for more than 6 months
01										
02										
03										
04										
05										
06										
07										
08										
09										

* Has the number of members in your household increased or decreased over the last year? (1) Yes (2) No

(1) Single (2) Single mother (3) Single father (4) Headed by child (5) Other		(1) General aid (2) Conditional aid (0) Not applicable		(1) Medical aid I (2) Medical aid II (0) Not applicable		I will keep household accounts for the continuing investigation	(1) Yes (2) No

II. Questions on the cost of living in the household over the last year (1 January – 31 December 2003)

(Unit:W10,000)

			Expenditure	Sufficiency or insufficiency	Amount of insufficiency
1	Food	What is the average monthly cost of food for your household?			
2	Housing, electricity, heating, water	What is the average monthly cost of housing, electricity, heating and water for your household?			
3	Clothing and shoes	What is the average monthly cost of clothing and shoes for your household?			
4	Medical	What are the average monthly medical expenses for your household?			
5	Public education	What is the average monthly expenditure on public education for your household?			
6	Private education	What is the average monthly expenditure on private education for your household?			
7	Leisure	What is the average monthly expenditure on leisure items in your household?			
8	Transport	What is the average monthly expenditure on transport in your household?			

9	Communications	What is the average monthly expenditure on communications in your household?			
10	Furniture, housekeeping	What is the average monthly expenditure on furniture and housekeeping in your household?			
11	Other expenses	What is the average monthly expenditure on other items, such as tobacco and cosmetics in your household?			
12	Tax	What is the average monthly expenditure on tax in your household?			
13	Social contributions	What is the average monthly expenditure on social contributions in your household?			
14	Total cost of living	What is the average monthly total cost of living in your household?			

15	Increased debts	How much have your debts increased by over the last year?			
16	Increased savings	How much have your savings increased by over the last year?			

III. Questions on the subjective minimum income (as of January 2004)

(Unit:W10,000)

1	What do you think is the minimum income with which your household make a healthy and cultural life for a month?	
2	What do you think is the minimum income with which your household can get along for a month?	
3	What do you think is the minimum income with which your household can make a bare living for a month?	

IV. Questions on household income over the last year (1 January – 31 December 2003)

1	Occupation of household members: please give the occupation of all household members over the age of 15 as of 31st December 2003 for the last year (1 January – 31 December 2003)? (1 if applicable, 0 if not applicable)

Number of members	Permanent employee	Temporary employee	Employer or self-employed	Farmer	Fisherman	Not a paid worker, student, etc.
Total number of members						
	Go to question 2	Go to question 3	Go to question 4	Go to question 5	Go to question 6	Go to question 7

2	Permanent employee: what is the total income of each permanent employee in your household for the last year (1 January – 31 December 2003)?

Number of members	Annual income (Unit: W10,000)	Number of members	Annual income (Unit: W10,000)	Number of members	Annual income (Unit: W10,000)

3	Temporary employee: what is the total income of each temporary employee in your household for the last year (1 January – 31 December 2003)?

Number of members	Annual income (Unit: W10,000)	Number of members	Annual income (Unit: W10,000)	Number of members	Annual income (Unit: W10,000)

4	Employer or self-employed: what is the annual net income of each employer or self-employed household member for the last year (1 January – 31 December 2003)?

Number of members	Annual income (Unit: W10,000)	Number of members	Annual income (Unit: W10,000)	Number of members	Annual income (Unit: W10,000)

5	Farmer: what is the annual net income from farming over the last year (1 January – 31 December 2003)?

Number of members	Annual income (Unit: W10,000)	Number of members	Annual income (Unit: W10,000)	Number of members	Annual income (Unit: W10,000)

6	Fisherman: what is the annual net income from fishing over the last year (1 January – 31 December 2003)?

Number of members	Annual income (Unit: W10,000)	Number of members	Annual income (Unit: W10,000)	Number of members	Annual income (Unit: W10,000)

7	Income from additional employment: what is your income from additional employment over the last year (1 January – 31 December 2003)?

Number of members	Annual income (Unit: W10,000)	Number of members	Annual income (Unit: W10,000)	Number of members	Annual income (Unit: W10,000)

* Questions on household income other than earned or business income over the last year (1 January – 31 December 2003)

			Current position (1: Applicable, 0: Not applicable)	Amount of money (Unit: W10,000)
8	Income from assets	How much income is earned from your household assets? ① interest, dividend ② rent ③ other	① ② ③	
9	Social insurance	How much social insurance benefit does your household receive? ① national pension ② civil service/army/teacher's pension ③ unemployment benefit ④compensation/insurance for an industrial accident ⑤ veteran's pension	① ② ③ ④ ⑤	
	Private insurance	① private insurance ② other	① ②	
10	Non-government subsidy	How much does your household receive in subsidies from sources other than the government? ① parents or dependents ② relatives ③ friends or neighbours ④ social welfare organisations ⑤ religious organisations ⑥ other	① ② ② ④ ⑤ ⑥	
11	Social security benefits	What is the social security benefit that your household receives form the government?		
12	Other government subsidies	How much does your household receive in other forms of government subsidy?		
13	Other income	What other income does your household receive from inheritance, bonds, etc.?		

V. Questions on debts (as of 31st December 2003)

			Current position (1: Applicable, 0: Not applicable)	Amount of money (Unit: W10,000)
1	Total debts	What type of debts do you have and how much do you owe? ① bank loan ② personal loan ③ credit card ④ returnable deposit received for lease of a house ⑤ credit	① ② ③ ④ ⑤	
2	Interest paid	How much interest did your household have to pay over the last year?		
		How much interest did your household pay over the last year?		

VI. Questions on housing

1	What type of accommodation have you lived in since 1st January 2004?	

① house ② apartment ③ flat ④ other

2	What is your status as an owner/occupier?	

① owner ② lease house on a deposit basis ③ rent on part-deposit basis ④ rent ⑤ other

VII. Questions on assets owned by all household members (as of 31st December 2003)

			Current position (1: Applicable, 0: Not applicable)	Amount of money (Unit: W10,000)
1	Housing	What is the value of your accommodation?		
	Housing (Amount of rent)	What is cost of the deposit or rent for your accommodation?		

2	Owned properties	What the value of properties that you own other than your present accommodation? (1) house (2) other building (3) land	①		②		③		
3	Occupied properties	What is the value of occupied properties other than your present accommodation? (1) deposit (2) other	①		②				
4	Financial assets	What type of financial assets does your household have, and what is their value? (1) savings (2) shares/bonds (3) loan club (4) other (private loan, etc)	①		②		③	④	
5	Farm machinery	What type of farm machinery does your household own, and what is its value? (1) thresher (2) cultivator (3) combine (4) tractor (5) other	①	②	③	④	⑤		
6	Livestock	What type of livestock does your household own, and what is its value? (1) cows (2) pigs (3) chickens (4) other	①		②		③	④	
7	Other	What other types of assets does your household own, and what is their value? (1) car (2) membership (3) other (jewellery, boat, etc)	①		②		③		

VIII. Questions on standard of living (as of January 2004)

	Items	Our household				I think it is	
		① has ② doesn't have and can't afford ③ doesn't have but doesn't want ④ not applicable				① necessary ② good to have or do	
A. Durables							
1	Refrigerator	1	2	3		1	2
2	Washing machine	1	2	3		1	2
3	Microwave	1	2	3		1	2
4	Mobile phone	1	2	3		1	2
5	VCR or DVD player	1	2	3		1	2
6	Personal computer	1	2	3		1	2
7	Internet	1	2	3		1	2
8	Car	1	2	3		1	2
B. Diet							
9	Meat or fish every week	1	2	3	4	1	2
10	Fresh fruit every week	1	2	3	4	1	2
C. Clothing							
11	At least two warm coats (all members)	1	2	3	4	1	2
12	At least one best outfit for special occasions (adults only)	1	2	3	4	1	2
13	At least one pair of shoes (adults only)	1	2	3	4	1	2
D. Housing and living environment							
14	Heating using gas or paraffin, or central heating	1	2	3	4	1	2
15	Number of bedrooms appropriate to the needs of the household	1	2	3	4	1	2
16	Allocation of an independent room according to gender to household members over 11 years old	1	2	3	4	1	2
17	Access to public transport within 10-minute walk	1	2	3	4	1	2
E. Health							
18	Regular treatment of chronic illness in the case of members who have suffered from a chronic illness for over 3 months	1	2	3	4	1	2
19	Dental treatment in a dental clinic	1	2	3	4	1	2
20	Treatment in hospital when necessary	1	2	3	4	1	2
21	Taking oriental tonics or medicine to promote a nutritious diet and health	1	2	3	4	1	2
F. Children's education (only households with child/ren)						1	2
22	Having children that have graduated from at least high school	1	2	3	4	1	2
23	Having children taking extra activities	1	2	3	4	1	2
24	Having children buying necessary books	1	2	3	4	1	2
G. Leisure and activities							
25	Holidays away from home once a year	1	2	3	4	1	2
26	Eating out at least twice a year with family	1	2	3	4	1	2
27	Hobby or leisure activity	1	2	3	4	1	2
H. Savings							
28	Savings for a rainy day	1	2	3	4	1	2
29	Savings or individual pension for old age	1	2	3	4	1	2

30	Private insurances on top of social insurance	1	2	3	4	1	2
I. Social support							
31	Having relatives or friends who you can talk to and receive comfort from when in need	1	2	3	4	1	2
32	Having relatives or friends from whom you can have information such as work	1	2	3	4	1	2
33	Having relatives or friends from whom you can have material aid	1	2	3	4	1	2
J. Work conditions		① there is/are members in my household ② there is/are no members in my household ③ not applicable				① it should not ② it may	
34	Working over 50 hours a week	1	2	3		1	2
35	Working standing for over three quarters of the total working hours	1	2	3		1	2
36	Dangerous work conditions	1	2	3		1	2
37	At high risk of losing job	1	2	3		1	2

* Questions on standard of living in your household and experience with social assistance and social welfare service over the last five years

Period	38. Income	39. Has your household applied for social assistance?	40. Did you receive social assistance?	41. Did you receive any social services?
	① below minimum cost of living ② similar to minimum cost of living ③ above minimum cost of living	① Yes ② No	① Yes ② No	① Yes ② No
1999		1 2	1 2	1 2
2000		1 2	1 2	1 2
2001	1 2 3	1 2	1 2	1 2
2002	1 2 3	1 2	1 2	1 2
2003		1 2	1 2	1 2

	* Did your household experience any of the following in 2003?	① Yes ② No	
42	Have you missed out on a meal due to lack of money?	1	2
43	Have you delayed paying rent for over 2 months or moved out due to inability to pay rent?		
44	Have you made any late payments for national pension, medical insurance, employment insurance, light, telephone or water bill due to lack of money?	1	2
45	Has your electricity, telephone or water supply been disconnected because you have been unable to pay for these services?	1	2
46	Have you been unable to pay the fees for public education for your children (except for undergraduate and over) for more than a month?	1	2
47	Have you been unable to heat your house due to lack of gas or fuel over winter?	1	2
48	Have any members of your household not been in hospital due to lack of money?	1	2

	* Please answer the following (as of January 2004)	① Yes ② No	
49	Is there an indoor toilet in your accommodation?	1	2
50	Does the roof of your accommodation leak?	1	2
51	Does your accommodation have facilities for water supply and drainage?	1	2
52	How is public security near your accommodation?	1	2
53	Are there any household members who cannot pay off the loan on their credit card?	1	2
54	Are there any household members who have bad credit ratings?	1	2

55. Please tick an appropriate score that indicates your household's economic situation.

Very poor									Very well off
1	2	3	4	5	6	7	8	9	10

56. Do you think the economic situation of your household will be better or worse in the near future?

(1) similar (2) better than now (3) worse than now

Appendix 2. Questionnaire for the pilot survey

Questionnaire for poverty in Korea

This questionnaire of the pilot survey is built up for investigating poverty in Korea. It is expected that this survey will promote the study of poverty in Korea and also obtain a basic data for a poverty policy.

Information obtained from this survey will be handled confidentially.

Thank you for agreeing to do this questionnaire.

2003. 10

University of Edinburgh

Ph.D student

Seung-Ki Lee

Part I. Basic questions

1. Questions for respondent and their household
   (1) Address of respondent:
   (2) Relationship between the respondent and the head of household:
   (3) Respondent's age:
   (4) Number of members of household:

   * Please tick an appropriate choice in the case of question (5) and (6) below

   (5) Types of protection for household
      (a) Home aid (b) Self-support aid (c) Temporary livelihood aid
      (d) Temporary self-support aid (e) None
   (6) Types of household
      (a) Single (b) Single mother (c) Single father (d) Headed by child (e) Others

   * Please answer the questions below as of 1st October 2003.

Relationship between members and head of household (1)Head (2)Spouse (3)Children (4)Others		Sex (1)Male (2)Female	Age	Living arrangement (1)Together (2)Separate	Occupation*	Income **	Disability or chronic illness ***
01							
02							
03							
04							
05							
06							
07							
08							

* 11. employee 12. employer or self-employed 13. agriculture or fishery 14. job on daily basis 15. temporary workers 21. unemployed 22. housekeeper 23. children(not in school) 31. primary school 32. middle school 33. high school 34. undergraduate 35. postgraduate 41. service in army 42. others

** Total income for the past 1 year

*** 1. registered disabled person (level 1) 2. registered disabled person (level 2) 3. registered disabled person (level 3) 4. registered disabled person (level 4) 5. registered disabled person (level 5) 6. registered disabled person (level 6) 7. non-registered person 8. chronically diseased person 9. Others

2. Questions for income of household

			Amount of money
1	An earned income	Income (before-tax) for the past 1 year of your household.	
2	A business income	Business income for the past 1 year of your household	
3	Income from Livestock, Fishery or Agriculture	Net income from Livestock, Fishery or Agriculture for the past 1 year	

4	Income from side job	Income from the probation or side job for the past 1 year of your household	
5	Income from Assets	Income from assets for the past 1 year of your household	
6	Pension	Pension benefits for the last month of your household	
7	Subsidy from non-government	Subsidy from all the sources like relatives, except for Government, for the last month of your household	
8	Other subsidies	Subsidy from Government, for the last month of your household	

3. Questions for assets

			Types and Amount of money
1	Accommodation	Type and the price of the house you are living now	
2	Real estates except for accommodation	Type, and the price of the real estate other than the house you are living now	
3	Financial Assets	Type and the price of the financial assets	
4	Others	Type and the price of any other assets	

4. Questions for debts

			Types and Amount of money
1	Debts in total	Type and the amount of the debts you owe now	
2	Interest expenditure	The average monthly interest expenditure on the debts for the past three months	

5. Questions for arable land, farming machine and livestock

			Types and Current price
1	Arable Land	Type and the price of the arable land you own	
2	Farming machine	Type and the price of the farming machine you own	
3	Livestock	Type and the price of the livestock you own	

Part II. Questions for living conditions

1. How satisfied are you with your accommodation?
   (1) Very satisfied
   (2) Fairly satisfied
   (3) Nether satisfied nor dissatisfied
   (4) Slightly dissatisfied
   (5) Very dissatisfied

2. Do you have any of the following problems with your accommodation?

   TICK All THAT APPLY
   (1) Shortage of space
   (2) Too dark, not enough light
   (3) Lack of adequate heating facilities
   (4) Leak roof
   (5) Damp walls, floors, foundations, etc
   (6) Rot in window frames or floors
   (7) Mould
   (8) No place to sit outside, e.g. a terrace or garden
   (9) Other
   (10) None of these problems with accommodation

3. When thinking about your local area where you live, how much satisfied are you with this area as a place to live?
   (1) Very satisfied
   (2) Fairly satisfied
   (3) Nether satisfied nor dissatisfied
   (4) Slightly dissatisfied
   (5) Very dissatisfied

4. Which of the following statements best describe your own health state today?
   (1) I have no pain or discomfort
   (2) I have moderate pain or discomfort
   (3) I have extreme pain or discomfort

5. Do you or does anybody else in your household have any long-standing illness, disability or infirmity? By long-standing I mean anything that has troubled you over a period of time or that is likely to affect you over period of time
   (1) Yes (go to 5-1)
   (2) No (go to 6)

   5-1 Does this illness or disability limit your activities or your household in any way?
   (1) Yes
   (2) No

6. I would like to ask you about the items and activities if they are **"Necessary"** or **"Desirable but not necessary"**.

   6-1. In these boxes are a number of different items or activities which relate to our standards of living. I would like you to indicate the living standards you feel all adults should have in South Korea today by ticking in the appropriate box.

	Items	Necessary	Desirable but not necessary	Don't know
1	Three meals a day			
2	Meat or fish every week			
3	Home with heating facilities			
4	Two pairs of shoes			
5	Television			
6	Telephone			
7	Refrigerator			
8	Damp-free home			
9	Indoor toilet			
10	Car			
11	Presents for friends or family once a year			
12	Warm coat			
13	Washing machine			
14	VCR			
15	Fresh fruit and vegetables every week			
16	Computer			
17	Outfit for social or family occasions such as parties and weddings			
18	Microwave			
19	Mobile phone			
20	CD Player			
21	Replacing worn-out furniture			
22	Replacing or repairing broken electrical goods such as refrigerator or washing machine			

23	Internet			
24	A small amount of money to spend each week on yourself, not on your family			
25	Having a daily newspaper			
26	Electric fan			
27	Home with water facilities and sewerage system			
28	Number of bedrooms appropriate to the needs of the household			
29	Treatment in hospital when necessary			
30	Purchasing necessary medicine			
31	At least high school education for children			
32	Extra activities after school for children			
33	Hobby or leisure activity			
34	Holiday once a year with family			
35	Presents on special occasions such as New year day or Chusuk			
36	Eating out twice a year with family			
37	Visit to hometown or relatives on new years day or Chusuk			
38	Attending wedding and funerals			
39	Visiting friends or family in hospital			
40	Visit to school of children, for example, sports day, parents evening			

6-2. (Answer only if there is child(ren) in the household). Now I would like you to do the same thing for the items or activities, but this time thinking of children.

	Items	Necessary	Desirable but not necessary	Don't know
1	Three meals a day			
2	Toys (e.g. dolls, play figures, teddies, etc)			
3	Leisure equipment (e.g. sports equipment or a bicycle)			
4	Enough bedrooms for every child over 11 of different sex to have his or her own bedroom			
5	Computer games			
6	Warm coat			
7	Books of her or his own			
8	New, properly fitted, shoes			
9	Pocket money			
10	Safe place to play near home			
11	Hobby or leisure activity			
12	Celebrations on special occasions such as birthdays, Christmas or other special days			
13	Swimming			
14	Holiday away from home at least once a year with his or her family			
15	Going on a school trip			

6-3. In these boxes are a number of different items which relate to our standards of living. I would like you to indicate the living standards you "have" or "do not have but don't want" or "do not have and can't afford" by ticking in the appropriate box.

	Items	Have	Do not have but don't want	Do not have and can't afford	Don't know
1	Three meals a day				
2	Meat or fish every week				
3	Home with heating facilities				

4	Two pairs of shoes				
5	Television				
6	Telephone				
7	Refrigerator				
8	Damp-free home				
9	Indoor toilet				
10	Car				
11	Presents for friends or family once a year				
12	Warm coat				
13	Washing machine				
14	VCR				
15	Fresh fruit and vegetables every week				
16	Computer				
17	Outfit for social or family occasions such as parties and weddings				
18	Microwave				
19	Mobile phone				
20	CD Player				
21	Replacing worn-out furniture				
22	Replacing or repairing broken electrical goods such as refrigerator or washing machine				
23	Internet				
24	A small amount of money to spend each week on yourself, not on your family				
25	Having a daily newspaper				
26	Electric fan				
27	Home with water facilities and sewerage system				
28	Number of bedrooms appropriate to the needs of the household				
29	Treatment in hospital when necessary				
30	Purchasing necessary medicine				
31	At least high school education for children				
32	Extra activities after school for children				
33	Hobby or leisure activity				
34	Holiday once a year with family				
35	Presents on special occasions such as New year day or Chusuk				
36	Eating out twice a year with family				
37	Visit to hometown or relatives on new years day or Chusuk				
38	Attending wedding and funerals				
39	Visiting friends or family in hospital				
40	Visit to school, for example, sports day, parents evening				

6-4. (Answer only if there is child(ren) in the household) Now I would like you to do the same thing for the children.

	Items	Have	Do not have but don't want	Do not have and can't afford	Don't know
1	Three meals a day				
2	Toys (e.g. dolls, play figures, teddies, etc)				
3	Leisure equipment (e.g. sports equipment or a bicycle)				
4	Enough bedrooms for every child over 11 of different sex to have his or her own bedroom				
5	Computer games				
6	Warm coat				
7	Books of her or his own				
8	New, properly fitted, shoes				

9	Pocket money				
10	Safe place to play near home				
11	Hobby or leisure activity				
12	Celebrations on special occasions such as birthdays, Christmas or other special days				
13	Swimming				
14	Holiday away from home at least once a year with his or her family				
15	Going on a school trip				

7. Still thinking about people who lack the things you have said are necessities for living in South Korea today, do you think that the Government is doing too much, too little or about the right amount to help these people?

(1) Too much
(2) Too little
(3) About the right amount
(4) Don't know

8. In your opinion, which of the following would be effective in reducing poverty?

TICK All THAT APPLY

(1) Increasing pensions
(2) Increasing Minimum standard living cost
(3) Increasing other benefits e.g. income deduction
(4) Investing in skills training for the unemployed
(5) Investing in education for children
(6) Investing in job creation
(7) Improving access to child care
(8) Redistribution of wealth
(9) Minimum wage
(10) Increasing trade union rights
(11 Requiring unemployed young people to work
(12) Requiring unemployed lone parents to work
(13) None of these

9. Have you ever been disconnected in relation to water, gas, electricity and the telephone during the past year because you couldn't afford it?

TICK All THAT APPLY

(1) None of these
(2) Water
(3) Gas
(4) Electricity
(5) Telephone

10. Have you ever used less than you needed to in relation to water, gas, electricity and the telephone during the past year because you couldn't afford it?

TICK All THAT APPLY

(1) None of these
(2) Water
(3) Gas
(4) Electricity
(5) Telephone

11. Have there been times during the past year when you have had to borrow money from pawnbrokers or money lenders, excluding banks or building societies, or from friends and family in order to pay for your day-to-day needs?

TICK All THAT APPLY
(1) None of these
(2) Pawnbroker
(3) Money lenders
(4) Friend(s)
(5) Family

12. I'd like you to let me know which of these items you **PERSONALLY** have gone without in the past year due to lack of money?
TICK All THAT APPLY
(1) Clothes
(2) Shoes
(3) Food
(4) Heating
(5) Telephoning friends or family
(6) Going out
(7) A hobby or sport
(8) A holiday
(9) Never go without
(10) Money never tight

13. (Please answer only if there is child(ren)) What about your child(ren), which of the things has he/she/they gone without each of these things in the past year due to lack of money?
TICK All THAT APPLY
(1) Clothes
(2) Shoes
(3) Food
(4) A hobby or sport
(5) A trip or holiday arranged by the school
(6) A family holiday
(7) Pocket money
(8) Never go without
(9) Money never tight

14. Looking back over your life, how often have there been times in your life when you think you have lived in poverty as of that time?
(1) Never
(2) Rarely
(3) Occasionally
(4) Often
(5) Most of the time

15. Has anything happened recently (in the past two years) in your life which has....
(1) Improved your standard of living
(2) Reduced your standard of living
(3) None of these

16. Has anything happened recently (in the past two years) in your life which has....
(1) Increased your income
(2) Reduced your income
(3) None of these

17. Is there anything that you expect to happen in the near future (in the next two years) in your life which will.....
(1) Improve your standard of living
(2) Reduce your standard of living
(3) None of these

18. Is there anything that you expect to happen in the near future (in the next two years) in your life which will.....
(1) Improve your standard of living
(2) Reduce your standard of living
(3) None of these

19. Over the last 10 years, do you think that poverty in South Korea has been?
(1) Increasing
(2) Decreasing
(3) Staying about the same
(4) Don't know

20. Over next 10 years, do you think that poverty in South Korea will?
(1) Increase
(2) Decrease
(3) Stay at the same level
(4) Don't know

21. Over the last 10 years, do you think that poverty gap in South Korea has been?
(1) Increasing
(2) Decreasing
(3) Staying about the same
(4) Don't know

22. Over next 10 years, do you think that poverty gap in South Korea will?
(1) Increase
(2) Decrease
(3) Stay at the same level
(4) Don't know

23. Why, in your opinion, are there people who live in need? Here are five opinions – which is the closest to yours?

TICK ONE ONLY
(1) Because they have been unlucky
(2) Because of laziness and lack of willpower
(3) Because there is much injustice in our society
(4) It's an inevitable part of modern progress
(5) Because one's parents are poor
(6) None of these
(7) Don't know

24. A number of people have told us they have had to miss our on meals because of a lack of money. Have there been times during the past year when you did not have enough money to buy food you (and your family) needed?

(1) Yes
(2) No
(3) Don't know

25. Have there been times in the past year when you've felt isolated and cut off from society because of lack of money?

(1) Yes
(2) No
(3) Don't know

26. Are you unemployed at present? If yes, for how long?

(1) Yes, up to 3 months
(2) Yes, 3 to 6 months
(3) Yes, 6 to 12 months
(4) Yes, 12 months or longer
(5) No, not currently unemployed

27. Are your spouse unemployed at present? If yes, for how long?

(1) Yes, up to 3 months
(2) Yes, 3 to 6 months
(3) Yes, 6 to 12 months
(4) Yes, 12 months or longer
(5) No, not currently unemployed

28. Looking back over the last ten years, for how long have you been unemployed?

(1) Never
(2) Less than 3 months in total
(3) 4 to 6 months in total
(4) 7 to 12 months in total
(5) Over 12 months in total

Appendix 3. Fourteen questions

Q1. Please tick an appropriate score that indicates your household's economic situation.

Very poor									Very well off
1	2	3	4	5	6	7	8	9	10

Q2. How would you describe your household?

(1) Poor
(2) Somewhere in between
(3) Well off

Q3. Have the conditions of your household changed in the last two years?

(1) Become worse
(2) Become better
(3) Stayed pretty much the same

Q4. Looking back over your life, how often have there been times in your life when you think you have lived in poverty according to the standards of that time?

(1) Never
(2) Rarely
(3) Occasionally
(4) Often
(5) Most of the time

Q5. Income is the money that comes into a household, usually each month. When you think of the average monthly income of your household, in terms of making ends meet, do you consider it to be

(1) Deficient
(2) Sufficient
(3) Somewhere in between

Q6. Please tick an appropriate score that indicates your household's income in terms of making ends meet

Very deficient									Very sufficient
1	2	3	4	5	6	7	8	9	10

Q7. Has your household's income changed in the last two years?

(1) Increased
(2) Decreased
(3) Stayed much the same

Q8. When considering your household's *total wealth*, including income and all other assets (e.g. savings or properties, etc), how do you consider it in terms of making ends meet?

(1) Very deficient
(2) Deficient
(3) Just sufficient
(4) Sufficient
(5) More than sufficient

Q9. Have there been times in the last year when you have felt isolated and cut off from society because of lack of income or wealth?

(1) Never
(2) Rarely
(3) Occasionally
(4) Often
(5) Most of the time

Q10. Earlier you were asked whether your household had access to the necessities of life (things like having meat or fish every week, a refrigerator, a phone, a warm coat, and the ability to visit your family on holidays, etc). Thinking about the general situation of your household, do you feel that it is

(1) Deficient in most of the necessities of life
(2) Deficient in many necessities of life
(3) Deficient in a few necessities of life
(4) Deficient in only a few necessities of life
(5) Not at all deficient

Q11. Please tick an appropriate score that indicates the degree of deficiency of your household

Very deficient									Not at all deficient
1	2	3	4	5	6	7	8	9	10

Q12. Has the level of deprivation in your household changed in the last two years?

(1) Increased
(2) Decreased
(3) Stayed much the same

Q13. Have there been times in the last year when you have felt isolated and cut off from society because you were lacked the necessities of life?

(1) Never
(2) Rarely
(3) Occasionally
(4) Often
(5) Most of the time

Q14. How do you rate the way the Government helps people in poverty?

(1) More than adequate
(2) Sufficient
(3) About the right amount
(4) Deficient
(5) Very deficient
(6) Don't know